

Montana

policy REVIEW

Community
Responses
to Energy
Development



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The Montana State University Local Government Center is an educational outreach organization whose purpose is to strengthen the capacities of Montana's local governmental units to deliver essential services efficiently and to provide training, technical assistance, and research to local officials, (MCA 20-25-237).

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Introduction

Energy development in the Williston Basin is dramatically transforming parts of northeastern Montana, and the impacts are felt across the region. Large scale drilling and hydraulic fracturing (commonly known as fracking) activity has brought a booming economy to rural communities in North Dakota and Montana by introducing lucrative wages and unprecedented business opportunities. The accompanying rapid population influxes have also strained city and county infrastructures, created widespread housing shortages, and altered communities and the natural environment in ways yet to be measured.

This issue of the Montana Policy Review, titled *Community Responses to Energy Development* addresses community efforts to mitigate the changes taking place in oil country. The following articles recognize the challenges and complexities of natural resource development while accentuating positive, forward-looking responses, as well as lessons learned from communities that have already weathered the energy boom and recommendations for those on the fringe of development.

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In Their Own Words:

HOW SIDNEY, MONTANA, AND WATFORD CITY, NORTH DAKOTA, ARE WEATHERING THE STORM

By Janelle Booth and Paul Lachapelle

Communities across the Bakken are facing unprecedented challenges brought on by the oil boom. Population influxes and heavy drilling activity have put pressure on existing infrastructure and created the need for municipalities to seek creative answers. Sidney, Montana and Watford City, North Dakota are two small cities who are feeling the strain.

Sidney is a city in eastern Montana less than 10 miles from the North Dakota border. The 2000 census counted 4,774 people with an increase to 5,191 at the 2010 census. Watford City, located in western North Dakota, has a population of 1,744 at the 2010 census, up from 1,435 in 2000. Extensive population growth has occurred in both cities since the 2010 census and current figures are difficult to assess. These communities sit atop the biggest lake of oil to be discovered in North America since Alaska's Prudhoe Bay in 1968; by some estimates, 25,000 square miles oil with eleven billion barrels are available to be tapped using existing technology.¹

To get to the heart of the challenges and opportunities that each community is currently facing, we interviewed their respective mayors and public works directors. These city leaders discussed the major issues facing Sidney and Watford City from a local government perspective, the steps they are taking to overcome difficulties, and the opportunities and positive strategies that have resulted.

- Bret Smelser is Mayor of Sidney, MT
- Brent Sanford is Mayor of Watford City, ND
- Jeff Hinz is Director of Public Works, Sidney, MT
- Justin Smith is Director of Public Works, Watford City, ND

Growth Challenges – What are the biggest challenges related to the recent influx of people to your city?

Brent Sanford: As this thing was starting to heat up, there were man camps and shops starting to pop up. It was very apparent that the oil companies were moving in this direction. They've always found oil here. They found oil in Sidney and they found oil in Stanley, and Watford City is at the center of the play. You could see it was coming. We've had tremendous growth and challenges for the city. This town was fifteen hundred people. Now it's anyone's guess—somewhere between six thousand and ten thousand people within a few miles

of town. The city limits themselves are growing with annexations, but there are not a lot of new permanent structures around. If one looks at it from afar he or she might think that the growth isn't a huge impact, but it really has been for the staff of the city.

Bret Smelser: Our garbage rate has more than doubled. Our crime rate has almost doubled. The image I don't want to portray is that we are the Wild West, because when you look at the increases per capita, our crime rate is the same as Billings or other places. It's just that we are feeling the impact that an extra 1,500 residents are putting on us.

Jeff Hinz: Right now, the city is handling about a 120 percent increase in garbage. The counties just built a new garbage cell two or three years ago, and it was supposed to last 30 years. Now it's looking like it will last about eight years.

City Planning – What efforts have been made to plan for the boom?

Brent Sanford: Before the boom, we didn't have a planning department or a planner at all. Now we have a planner, a building inspector, a secretary for the planner, and we're looking to hire an assistant planner. These positions came out of nowhere. City planning used to be a part time position that took the superintendent of public works or the city administrator a few hours each month, and it now takes four full-time people.

Justin Smith: We were fortunate enough to have some consultant engineers get involved before things really got going. They were aware of what could happen, and started working on a plan for some infrastructure expansion and planning for land use, etc. Because of that plan, the state legislature gave the city a significant amount of grant money to help fund those projects. We're trying to do as much proactive planning and design work as possible, to be ready for the need before it arises. About ten or fifteen years ago the city was in a completely opposite situation. Things were going backwards. The school was looking at actually closing the elementary school and combining into the high school. Businesses were closing. The town was trying to do anything it could to get people to stay or to come back to the community, and part of that was to come up with a long-term plan to develop some different facilities and features of the communities that would be inviting for people to come and live. Town officials

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—Justin Smith, Watford City



¹ <http://abcnews.go.com/Business/north-dakotas-oil-boom-darkside/story?id=15458362#.UJAN52cSy4Z>

put together a pretty thorough long-term plan about ten years ago, and were used to this planning phase, so when the oil activity increased they realized quickly that they should be ahead of it.

Staff Wages – How have you dealt with the increase in salaries brought on by competing jobs in the oilfield?

Jeff Hinz: It's really hard to compete when you've got the oilfield people making anywhere from \$70,000 to \$120,000 a year. They work for it, but \$34 an hour is a lot. There are people from out of state who apply here, but with no housing it's very difficult to hire someone like that.

Bret Smelser: We've done our best to raise wages. But what happens if we have the ability to match those wages, and the oilfield diminishes? Then the city of Sidney is saddled with a pretty high price. There's a balancing act there that we have to do.

Justin Smith: Staffing up with appropriate headcount has been challenging, but it's been better for us than for some other businesses in the area. The city council has been very generous. They realized early on that they couldn't compete with oilfield wages if they didn't bump up city wages, so the city wages are competitive. We've been very lucky to get good workers and be able to retain those workers so far. But that's an ongoing effort. It looks like we're going to continue to grow, so we're planning for expanded headcount next year as well—in all departments, not just public works. The entire cost of living in this area is very inflated right now, and it has to come in line to be competitive when things cool off. We're going to have to continue to raise our rates, like everyone else, to continue to cover our expenses, and we'll try to ease off on that in the future.

Infrastructure Needs and Challenges – How is the physical framework of the city weathering the boom?

Brent Sanford: Not only do the decaying pipes and streets in the center of the town need to be replaced due to regular wear and tear, now they're being hit with more demand. Now there's many, many times more traffic, there's trucks in the middle of town, there's lines of pickups going through town. All the side streets are being hit with people trying to avoid the main street and the truck routes, so there is more demand for chip sealing and crack repair than ever before. Usually a chip sealing project costs around \$600,000 a year. Taking care of the core infrastructure in the existing city center is daunting in itself. When you start looking at new developments, it's millions and millions of dollars for each development.

Justin Smith: Our wastewater system is taxed to the maximum right now, as well as the water system. This whole system was put together back in the 1980s during the oil boom, so it was sized for a community

of 2,000 to 3,000 people. We've gone well beyond that. We're probably servicing 4,000 to 5,000 people right now. In addition, all the oil field service work is being requested of the city. The city has been selling bulk water to drill and frack wells. We had been taking septic disposal into our wastewater system as well, but we've since stopped that. We couldn't handle any more of it. The other infrastructure challenge is the expansion of our water system because of additional houses on the perimeters of town. We have a lot more calls just chasing things – people needing water turned on and off and doing line locates. There's so much construction, and anywhere our utilities exist we have to go mark out where the lines are before they excavate. That has gone up ten- or twenty-fold from where it was a few years ago.

Roads are becoming a problem now with the significant increase in traffic. It didn't really show up last year. We did normal maintenance, and now this year we've really seen the additional traffic affect the roads in the city. In the surrounding state roads, the damage showed itself pretty severely last year. We've had to dramatically increase our road maintenance and we're in the process of putting together a plan on how to rejuvenate our roads and expand paved roads offered to these new subdivisions. We're looking at using the same funding structure—taking the plan to the state and saying “here, we have this need and we have no way to fund it. Can you take some of the state oil revenue and defer it to Watford City?” That's what happened on this last go-around that funded the current infrastructure installation.

Bret Smelser: Infrastructure upkeep is the most crucial challenge. A \$12 million to \$15 million lagoon fix is obviously a challenge when you're only getting \$700,000 or \$800,000, or 1/10 of 1 percent, of the oil revenue stream. Even though my friend Brent over in Watford City is facing the same challenges, they get about 8 percent of 600,000 barrels or 400,000 barrels a day, while Sidney gets 1/10 of 1 percent of 20,000 barrels. We are overwhelmed with increases in garbage collections and overwhelmed with police having to respond to more incidents. Our volunteer fire department is stretched – as an example, the other day they responded to three fires before noon. This is a volunteer fire department. Infrastructure, manpower, and the increases we're seeing in water, sewer, garbage collection—those are the major challenges. We've also approved some modular homes to be set on school property so they could have some housing.

Brent Sanford: They (energy employees) felt it was very important for towns of this size to be able to allow the housing to come in that is necessary for the employees who will work in this Bakken play for the next fifty years. We have a plan in place—an orderly growth plan—where we can grow in a positive way during this. We don't have to take the bad; we can just take the good. So we're looking for the single-family homes, and the permanent multi-family apartment buildings, and the permanent business growth, and not just all mobile homes and

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—Bret Smelser, Sidney



metal shops with scoria yards. That's what happened with the previous boom, and we don't want to do that again.

Cost of New Developments and Impact Fees – Who is paying for the development?

Bret Smelser: In 2004 we saw a need for Montana cities and towns that had been written out of the oil and gas revenue stream to go lobby, so we hooked up with these counties and got HB 758, which gives us 1/10 of 1 percent of oil and gas revenue. In 2006 or 2007 I realized that wasn't enough, so we collaborated with Willie Duffield, the executive director of the oil and gas counties again. We put together HB 790, which deals with the remaining 25 percent of the federal mineral royalties the state is holding that should go to counties. That bill was written that cities, towns, schools, tribes, and county government could go after those funds based on impact. That was about a \$10 million/year bill at that time. If Governor Schweitzer would have signed it as promised, we wouldn't be having the discussions we're having now. We would have taken care of the lagoon. We would have taken care of some of the \$55 million shortfall to build up the infrastructure, and to build up the town to accommodate about 10,000 people. After that bill was not passed, the 2009 and 2011 legislatures were just about grabbing more money from here. I didn't see where we had any tread to go to Helena and lobby because it was more about trying to balance the budget on the backs of oil and gas. We started looking at impact fees. We had our water and sewer impact fees ready this September. If I'd known that the county or the state wasn't going to help us with this, we probably would have initiated those sooner.

Brent Sanford: We end up with \$50,000 to \$60,000 per lot of infrastructure, and the only way we've been able to deal with that financially is to put all of it on the developers. Developers coming into Watford City have to front-load their entire infrastructure, including offsite improvements. This is a little bit unique, but it makes sense when you think about it. Offsite improvements are what we call developers being required to pave streets or improve roads out to their developments and not just expect the county and city to come in and build them a new road because they built five houses. We have an orderly process to annex into the city and hook into city services. You've got to annex into the city to receive the sewer and water, and you have to have a plan that would be applicable to the zoning that exists in that area. We have a very talented city planner on board. I believe the chaos is being handled. We do have impact fees as well, so in order for these apartment units and the single family units to come online, there are impact fees that will be dumping money into the coffers for emergencies and school and park boards, etc. The city is not fronting the actual hard infrastructure costs—the developers are paying for it one hundred percent.

The property taxes haven't gone up to pay for the new development, because there's not a lot of new building

that has been completed yet. So we're heavily reliant on the oil production tax distributions and energy impact dollars to help do this as a local government.

Bret Smelser: The mayor before me kept our rates unreasonably low. Our water and sewer rates have doubled since I took office. As mayor, I'm going to direct our city council to play all sides of this game. But it comes to a point in my mind where now we're starting to balance the oil and gas activity on the backs of our residents, and that's something I promised I wouldn't do to the city of Sidney. Financially, we're running through our cash reserve because we don't have the resources. When I stepped into office, we had \$5.3 million, and I got it up to \$7.5, and today we're at \$6.25. If we spend this whole budget we'll be down to \$3.8 million—and that still hasn't addressed the \$55 million that we need to fix the lagoon and the old water and sewer mains. We have cast iron from 1916 in the ground that we were replacing before the second wave came. We were doing okay during the first wave, but the second wave that came in the last two or three years has overwhelmed us. How are we addressing this? We're raising our water and sewer rates. We're raising our garbage and lighting rates. We are implementing impact fees, and we're hoping that we're successful in the next legislature with three bills that we're going to work with the League of Cities and Towns.

Opportunities – What new prospects have resulted from the energy development?

Brent Sanford: This economic boom has brought tremendous opportunity to this area. It's incredible. Looking back, it was pretty scary to see how sleepy the town was twenty, fifteen, and even ten years ago. Little towns were just shriveling up, literally. You had no young people. The school enrollment dropped in half, and it was headed to worse points. Now, with all these people here, all the jobs, all this economic growth, there's an opportunity to be seized. Communities want to grow in a positive way. We believe that if you sit back and do nothing, people are still going to come. They're just going to come in the form of whatever they can make happen. We've seen sloppy, temporary growth in oil booms—we had that in the 1980s. We had mobile homes as far as the eye could see, and as soon as the oil drilling pulled away, they all were pulled away. Some were left to decay and the property owners had to worry about cleaning them up, and we had trailer parks with only the little electric pedestals sticking out of the ground for 25 years. This go-around, we want to take advantage of the growth and attract long-term investors. We want to be the place where if someone wants to settle down and set up shop in the center of the Bakken play, they can have that opportunity in Watford City.

Justin Smith: There has been a real lack of retail and service growth because most of the locals, as well as people from outside the area, are a little bit gun-shy about being involved with oil boom and bust. It's

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—Brent Sanford, Watford City



starting to increase now. I think there's a reasonably strong market for the general retail and commercial businesses. The population is increasing and a significant amount of the influx will permanently reside here. I think early estimates from the economic development group were that about 20 percent of this influx of people would stay permanently, and that's probably a pretty safe assumption. The rest of the economy is so poor, if people see an opportunity they will follow it, even if this may not be their first choice to live. The oil boom in the 1980s wasn't this big, but it was big for the area. It was booming and it literally just shut off overnight. They said within a week there was no more work. Everybody went home. I don't think that will happen this time. The infrastructure that the oil companies are financing, the investment they're putting in, is enormous. They're planning on getting some return off that.

Bret Smelser: The opportunities obviously lie in growth, as well as us doing our part for energy independence for the whole country. Also, success stories are pretty common as far as businesses are concerned. The business climate out here is tremendous. I can cite my business that has doubled in growth for the last five years, every year. There are a lot of success stories out there for businesses.

Someday we'll have an increase in tax base, but obviously that comes after the infrastructure needs, so it's a catch-22. It's not soon enough to provide all of the build-out and infrastructure and other needs we have right now. We still want to retain some of the charm that we had five or ten years ago as being one of eastern MT's premier cities. We have lots to offer people that can live here. The challenge for us will be to bring the whole city together and come to an agreement, because at the end of the day you have half the people who want the city to remain as-is, and the other half wants to get to the top as fast as they can. It's a matter of compromise. The bottom line is that right now it is pretty hard to see a successful community without a revenue stream.

Citizen Participation – How have residents of your city stepped up to face the boom?

Brent Sanford: We've got some really talented people serving on municipal boards that have a passion for the community and doing the right thing, who are intelligent and can understand what's happening and look at the big picture. It's a lot to soak in, but we have some good people on these boards. The volunteer citizen boards are the ones that drive all of this—from the planning commission to the city council to the county commission to the economic development board to the school board and the health system board. The citizens are making these decisions. That's who we coordinate with to make sure we're all on the same page.

Justin Smith: There have been a lot of people who are eager to get involved to try to steer this thing in the right

direction to make it sustainable. The economy in this area has been typically agriculture, and that's never been overly lucrative, so there are a lot of people interested in serving on boards and continuing to look forward to make a plan for the future. Some people have had growing pains or complaints about the way things are, but for the most part everyone has been happy to have the activity. As of right now, the people that have moved here far outnumber the natives, and because it's so difficult everywhere else, everyone is pretty happy to be putting up with a little inconvenience to have a job and making a living. People will want to continue to make this a good place to live.

An example of a mixture between a government and community driven feature is a new daycare center. As part of the vision plan that the city got going last spring, they surveyed the community to understand what the community saw as needs, and one of the top needs was daycare. Between the city planner, one of the developers, the school, local daycares, citizens, and the state, they worked out a deal to initially fund and partially subsidize a very large daycare facility. The planning is basically complete now and they're starting to actually implement the project. I believe this will be a big success story for the community. Another part of that project is going to be housing for the school and possibly some city employees. Again, that will be subsidized by the school and by the city to help offset some of the high rent rates that are prevalent in most other places.

Bret Smelser: We have a citizen volunteer fire department, a citizen park and rec board, a citizen variance board, and they're all stressed out. We used to have two city council meetings a month, and there have been three months now where we've had four or five meetings a month. You also have to think about the little old retired lady on the corner that loved her neighborhood. Now she's looking at increases that she didn't expect and neighbors that she doesn't know. All of Sidney is participating in the growth, one way or the other.

Success Stories – What are some citizen-driven accomplishments?

Brent Sanford: About fifteen years ago, the community really needed a workout facility, and so an old mothballed church was turned into the Wellness Center. It was meant to be a temporary accommodation and it lasted for fifteen years. It's very sub-par for a community of two thousand people, let alone eight thousand. It became a big push from all age groups to have a better place for a walking path and for treadmills, and then the hospital decided to sponsor this building as well, and they included the physical therapy clinic in it. The leadership of the town basically came together and rolled this out. The city council, the county commission, and our Roughrider Sales Tax Fund all contributed between \$700,000 and \$800,000 to this project, so there was over \$2 million in public

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funding right at the get-go. Then a fundraising campaign was begun for the rest in the name of Connie Wold. She was our fitness leader for the town, an Ironman athlete and marathon runner. She was killed south of town, hit head on by an oil truck while riding her bike, training for another Ironman at forty-six years old. The inspiration of Connie was instrumental. The fundraising campaign was in her name, and the facility will be called the Connie Wold Wellness Center.

Bret Smelser: The biggest story that we have in the community is how we all came together after Sherry Arnold was abducted and killed. The community and the surrounding communities overwhelmed her family in their assistance in the search for her, and their support of the family. As a mayor I was really proud. It was a terrible tragic incident, but I was very proud of how the community, and I mean both eastern MT and western ND, came to the aid of Sidney.

Fifty Years from Now.... How do you want your leadership to be remembered?

Bret Smelser: In fifty years I'd like to be remembered as a steady, reasonable voice that tried to bring the parties together to make tough choices. I would like to be remembered as somebody that was patient yet deliberate, had a vision for the city of Sidney, but unfortunately didn't have the resources to get it all done in time.

Justin Smith: I would like to have installed and maintained things so they will last, without a lot of maintenance and rework, and that they can be easily expanded upon in the future. Looking at the city now, you can definitely see some parts of the city that were done very well, and they flow together and it is very easy to build off that. Then there are some areas that you can tell were haphazardly done, and the building becomes a standalone structure that doesn't flow very well with the city or with expanding.

What Should Other Communities Know?

Brent Sanford: The oil industry brings the people, but the local people are the ones that put together the solutions of how to keep their communities functioning. The state leadership and the oil industry tend to publicly tout their skills at helping the oil impacted areas, but passionate local leadership is what is determining the destinies for the towns impacted by this development.

Bret Smelser: Sidney would really benefit from the three bills that we'll be working on in the next session. One of these is the Federal Mineral Royalty bill, which if it were signed in 2007 we would probably have half our necessary infrastructure built. This is the big one – we want the ability to be written in statute like we were back in the 1970s and 1980s. We were written out of statute and traded for gambling money in exchange for oil revenue. The other major bill that we're trying to get through is to get a portion of the state's 51.8 percent [of

the oil revenue stream]. There was \$220 million collected in oil and gas revenue in the state of Montana last year. Richland County produced half of that. Our problem is that some people in certain parties are opposed to giving any of the 51.8 percent to the cities and towns because our school mills are too low and they need to lower the school mills in western MT. I don't buy that, and I don't accept that. The only way Sidney, Culbertson, Baker, Plentywood, and Poplar are going to catch up is if we get some type of cash infusion now and be written into statute. The third bill we're going after is the ability to tax motels up to \$3/night.

We need to do a better job of educating western Montana. Out of 129 incorporated cities and towns in Montana, 71 of them are in oil and gas producing counties. In those 36 oil producing counties, there are only 120,000 people to try and come to some kind of compromise with another 800,000+ people in the other parts of the state. We need people from eastern Montana to rise up and be heard and lay out a clear vision of where we need to go and what we need to do to accomplish our goals. We need the ability to be able to host this thing as North Dakota has. North Dakota has made great strides in being able to put the resources in front of the cities and towns, even though they're struggling and their growth is probably faster than ours. We need to be able to tell our story, and convince the state that a simple investment out here will do wonders.

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—Bret Smelser, Sidney





Improving Fiscal Policy to Maximize Benefits of Unconventional Oil Development in Montana Communities

by Mark Haggerty & Julia Haggerty

Introduction

Drilling for oil and natural gas is a high impact economic activity. Today's unconventional oil development and its effects differ in important ways from oil booms of the past. As the Bakken oil boom continues in North Dakota, Montana communities from Sidney to Billings are already feeling impacts and must consider their preparedness for the acceleration of drilling boom across the state line.

State and local fiscal policy—how the resource is taxed and how the revenue is distributed and spent—has a profound effect on the capacity for state and local governments to manage the impacts of energy development. By ensuring revenue is available in the time, place, and amount necessary to mitigate industrial and population growth related impacts, and by investing and saving revenue for long-term economic development, tax policies can increase the benefits of energy development.

One lesson from the recent natural gas surge (2003–2008) is that there is significant room for improvement in energy taxation in Montana and across the Rocky Mountain West. Ideally, states sharing unconventional oil resources would standardize fiscal policies, applying a consistent set of best practices to benefit communities and also industry by providing more predictability and certainty.

The current reality in the Bakken is that Montana and North Dakota take different approaches to taxing oil and gas activity, and to spending, sharing, and saving energy revenues. The differences affect the scope and nature of the economic development opportunities and challenges for Bakken communities on either side of the state line. This paper provides an overview of the unconventional oil resource in the Bakken to highlight the unique challenges and opportunities associated with this kind of energy development. We then compare state energy fiscal policies in Montana and North Dakota, and lastly offer a list of recommended changes to fiscal policy in Montana.

The Unconventional Bakken Oil Resource

Located mainly under portions of Montana, North Dakota, and Saskatchewan, the Bakken shale formation covers more than 200,000 square miles. Estimates of technically recoverable oil vary from 3 billion barrels to 24 billion barrels.¹

Freeing the oil trapped in the Bakken shale depends on horizontal drilling and fracking technology. In the Bakken, these technologies were first applied in Montana's Elm Coulee field in the early 2000s. Fracking and horizontal drilling techniques quickly moved into North Dakota, where development is now centered. North Dakota's oil production increased from 2.5 million barrels per month in 2004 to more than 19.8 million barrels per month by May 2012, more than a seven-fold increase.²

Short-lived Burst of Production in Bakken Wells Means More Widespread, Repeated Drilling Activity

Drilling and fracking an unconventional shale oil well generates an initial rush of oil that subsequently declines quickly.³ Unlike previous periods of oil development in the West—which were marked by an initial disruptive drilling phase followed by a long, relatively quiet production phase—development in the Bakken will be characterized by a continuous cycle of activity.

- 1 U.S. Department of the Interior, U. S. Geological Survey. Press Release. 3 to 4.3 Billion Barrels of Technically Recoverable Oil Assessed in North Dakota and Montana's Bakken Formation—25 Times More Than 1995 Estimate." April 10, 2008. <http://www.usgs.gov/newsroom/article.asp?ID=1911>. Fox, Michelle. Aug 24, 2011. CEO: 24 Billion Barrels of Oil in Bakken Shale. CNBC. <http://www.cnbc.com/id/44255518>.
- 2 U.S. Energy Information Agency. Field Production of Crude Oil (Thousand Barrels) by Area. http://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbbbl_m.htm.
- 3 The decline is not linear, however, and most wells will eventually stabilize and continue to produce for 30 years or more, albeit at volumes much lower than those achieved in the first year of production.

The basis for this change in the pattern of activity can be easily grasped by comparing the productivity of Alaska's Prudhoe Bay to the Bakken. A single Prudhoe Bay oil well could yield 10 million barrels of oil; in the Bakken a single well might yield half a million barrels of oil on average.⁴ In addition to drilling more wells to access equivalent amounts of oil, companies have also been exploring the use of intensive secondary production technologies such as refracking.

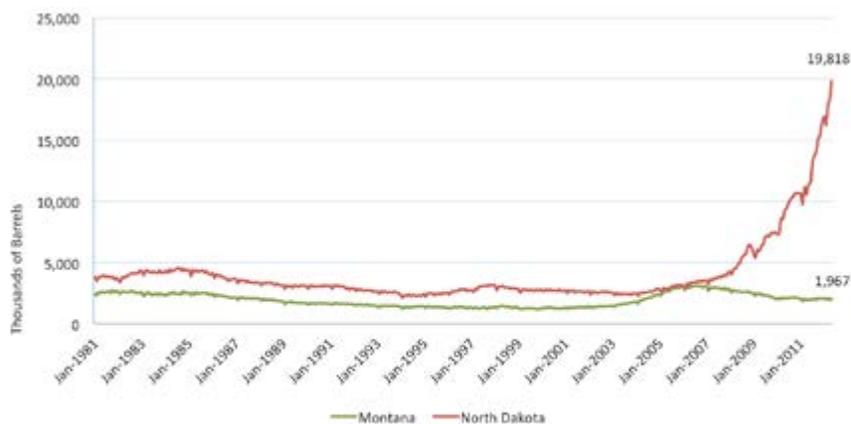
An average horizontal Bakken oil well drilled between 2008 and 2011 produced at an average rate of 372 barrels per day in the second month, declining to a low of 78 barrels per day in the 36th month. Based on these data, the typical Bakken well in the second year will produce only 55 percent of what it produced in the first year, a 45 percent decline. The decline rate slows to 32 percent in the third year. After three years, average daily production of 78 barrels is only 21 percent of the peak average daily production of 372 barrels achieved in the second month of production.⁵ These steep decline curves explain why companies are invested in developing effective secondary production techniques to keep the oil flowing from Bakken wells.

Together, these trends explain why the cost of production in the Bakken is so high, making oil development dependent on today's high world oil prices. Should prices fall (a recent Baker Hughes estimate suggests that \$80 per barrel is the price point

at which the average well becomes unprofitable⁶), production would drop steeply. The implications for communities tied to unconventional oil fields are profound. In the conventional oil boom, oil production—even after all drilling activity had been abandoned—offered an ongoing revenue stream (albeit one tied to volatile energy prices). In the unconventional development model, production levels will decline quickly, meaning that revenue would drop off steeply as well, reflecting both price and actual volume effects. In this sense, the risk of revenue volatility is even higher in unconventional production than with conventional oil production.

For North Dakota's and Montana's communities in the Bakken, the continuous drilling and fracking, and intensive secondary production activities will deepen social and industrial impacts and extend them over a long period of time. The arrival of jobs, revenue, and impacts in successive waves of development that may become the characteristic of unconventional oil development in the Bakken presents obvious economic opportunities, as well as challenges.

Figure 1. Monthly Oil Production in Montana and North Dakota, Jan. 1981 – May 2012.



U.S. Energy Information Agency. Field Production of Crude Oil (Thousand Barrels) by Area. http://www.eia.gov/dnav/pet/pet_crd_crdpn_adc_mbb1_m.htm.

4 BP Prudhoe Bay Fact Sheet, August 2006. Alaska's Prudhoe Bay had produced nearly 11 billion barrels of oil from just 1,114 wells by 2006, nearly 10 million barrels per well. http://www.bp.com/liveassets/bp_internet/us/bp_us_english/STAGING/local_assets/downloads/a/A03_prudhoe_bay_fact_sheet.pdf. Continental Resources estimates that 48,000 wells will need to be drilled over several decades to extract up to 24 billion barrels of oil from the Bakken (half a million barrels per well).

5 Data on production trends provided by geoLOGIC Data Center (<http://www.geologic.com/solutions/data/index.htm>), calculations provided by VISAGE consultants, (<http://www.visageinfo.com/>).

Unconventional Resources and Economic Development Challenges

Four main challenges inherent to unconventional oil confront communities attempting to benefit from the extraction of non-renewable resources. To overcome boomtown stresses, and to get ahead in the long term, fiscal policy must address each of these in turn⁷:

- 6 "U.S. oil below \$80 could slow shale oil drilling boom: Baker Hughes." Reuters News Service. Jul 20, 2012. <http://www.reuters.com/article/2012/07/20/us-oil-bakerhughes-idUSBRE86J1A520120720>
- 7 The short format of this article precludes a detailed literature review. The 1980s energy bust in the West produced an important cohort of sociological studies documenting boom and bust stresses in rural communities, and opportunities for recovery. Key references include: Brown, R. et. al. 2005. *The Boom-Bust-Recovery Cycle: Dynamics of Community Satisfaction and Social Integration in Delta, Utah*. Rural Sociology 70(1):28-49. Gulliford, A. 2003 (1989). *Boomtown Blues: Colorado Oil Shale*. Boulder: Univ. of Colorado Boulder Press. Smith, M. D., et. al. 2001. *Growth, Decline, Stability, and Disruption: A Longitudinal Analysis of Social Well-Being in Four Western Rural Communities*. Rural Sociology 66(3): 425-450. Another body of work seeks trends in the economic performance and well-being of areas specialized in extractive industries. See: James, A., and D. Aadland. "The Curse of Natural Resources: An Empirical Investigation of US Counties." *Resource and Energy Economics* 33, no. 2 (2011): 440-453. Relatively little attention has been paid in the academic literature to the link between institutions, like tax regimes, and economic performance in the United States, although the link between institutions and economic performance at the national level is a subject of strong interest in scholars of the "resource curse," c.f., Freudenburg, William R. 1992. "Addictive Economies: Extractive Industries and Vulnerable Localities in a Changing World Economy." *Rural Sociology* 57 (3) (September 1): 305-332. Mehlum, H., K. Moene, and R. Torvik. "Institutions and the Resource Curse*." *The Economic Journal* 116, no. 508 (2006): 1-20.

In addition, a number of white papers produced during the natural gas boom have considered the fiscal situation facing

- 1. Amount:** The cost of managing energy impacts often outstrips tax revenues. Studies and regional examples show that governments could remove incentives or raise tax rates without harming overall production.
- 2. Timing:** The time-lag between initial energy impacts when wells are drilled and when revenue is received from production can extend up to two years.
- 3. Distribution:** Some energy revenues should go to all areas impacted by energy development.
- 4. Volatility:** Price fluctuations can quickly accelerate or end quickly, making it difficult for communities to meet financial commitments or conduct multi-year projects.

The energy producing states in the West, including North Dakota and Montana, differ in how they levy taxes against drilling activities and production, and how the revenues are distributed and spent.⁸ Each state does relatively well addressing one or more of the four basic challenges, but no state has what could be considered a full suite of “best practices” that accomplish the goal of making energy development sustainable for energy-focused areas. The following discussion highlights differences between North Dakota and Montana.

Fiscal Policy in Montana and North Dakota: Amount and Timing

To highlight the impacts of differences in Montana and North Dakota’s fiscal policies as they relate to new unconventional oil drilling and production, consider the revenue collected from a typical horizontally-drilled oil well in North Dakota’s Bakken. There are two striking points of difference:

- Montana will collect \$800,000 less from each new well compared to North Dakota.
- It takes nearly two years after a well is completed before Montana collects any significant revenue from the oil it produces.

Figures 2 and 3 compare the types of taxes levied, the effective tax rate, and the timing of tax collections between Montana and North Dakota based on a typical horizontally completed Bakken oil well.⁹ Figure 4 compares the states in terms of cumulative revenue and average tax rate on the first three years of production of an average well.

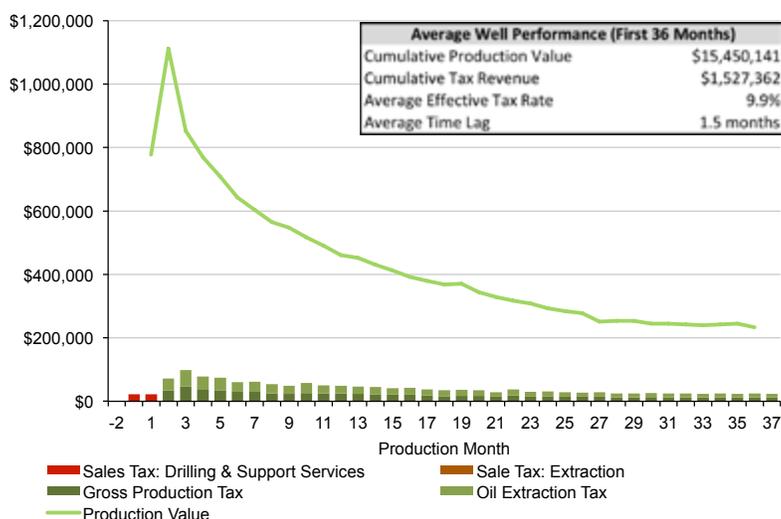


Figure 2. Tax Revenue Generated from an Average Bakken Horizontal Oil Well in North Dakota¹¹

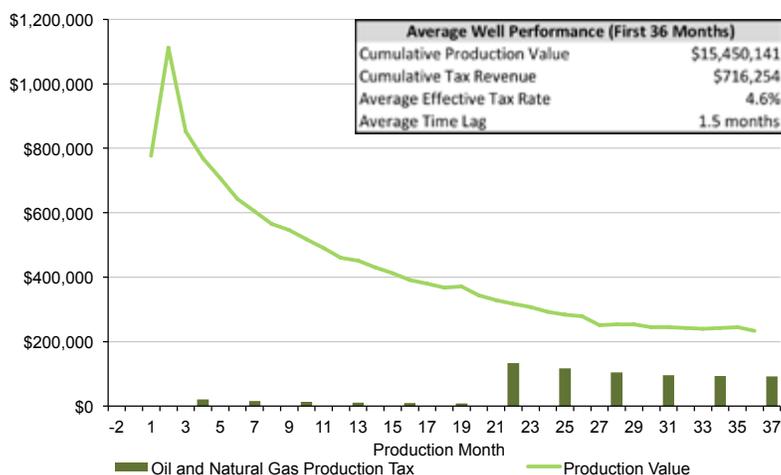
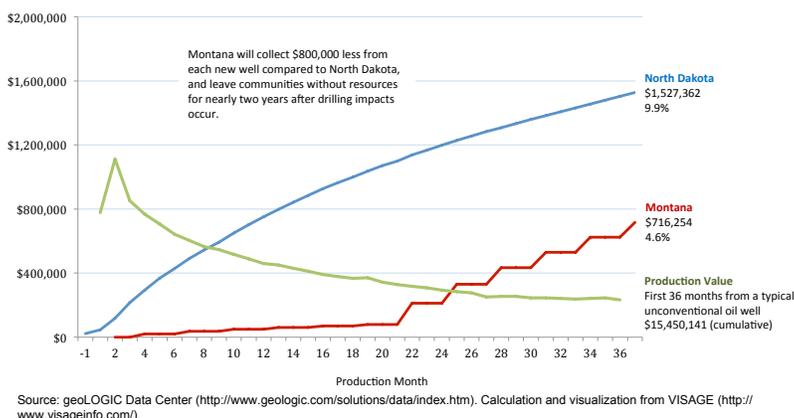


Figure 3. Tax Revenue Generated from an Average Bakken Horizontal Oil Well in Montana¹²



Source: geoLOGIC Data Center (<http://www.geologic.com/solutions/data/index.htm>). Calculation and visualization from VISAGE (<http://www.visageinfo.com/>).

Figure 4. Cumulative Revenue and Average Tax Rate on the First Three Years of Production from an Average Bakken Oil Well

local governments in places such as Colorado and Wyoming. Two relevant studies are: BBC Research & Consulting, 2008. Northwest Colorado Socioeconomic Analysis and Forecasts, Report prepared for the Associated Governments of Northwest Colorado and Ecosystem Research Group, 2009. Sublette County Socioeconomic Impact Study, Phase II—Final Report. Report prepared for Sublette County Commissioners.

8 Headwaters Economics, 2012. “Benefiting from Unconventional Oil.” <http://headwaterseconomics.org/energy/western/unconventional-oil-and-north-dakota-communities/>

9 The total production value and the timing of production value for a typical Bakken oil well is estimated by applying a constant price to the production curve of the typical well. At \$98/bbl the average Bakken horizontal oil well will produce \$15.45 million in cumulative production value over the first three years of its life, peaking at \$1.1 million in the second month and declining to \$233,142 in the 36th month of production.

Figure 2 illustrates that North Dakota captures revenue relatively early in the drilling and initial production phase. In North Dakota, a sales tax collects revenue from drilling and support services and two production taxes levied monthly ensure a short lag between production and revenue collections. North Dakota's average effective tax rate is higher over the first 36 months of production at 9.9 percent (\$1.5 million in cumulative tax revenue) compared to Montana's average effective tax rate of 4.6 percent (\$716,254 in cumulative tax revenue) over the same period (Figure 3). It also takes nearly two years after a well is completed before Montana collects any significant revenue from the oil it produces.

Montana performs so poorly because the state has no sales tax on drilling and support services, and grants an 18-month holiday on production from new horizontal wells.¹⁰ The cumulative revenue curves in Figure 4 shows how Montana (red curve) will collect \$800,000 less from each new well over the first 36 months of production compared to North Dakota (blue curve), and leave communities without resources for nearly two years after drilling impacts occur.

Fiscal Policy in Montana and North Dakota: Distribution

Even with its comparative advantage in capturing more revenue more quickly from unconventional oil wells, North Dakota's local governments are experiencing difficulties in keeping pace with service and infrastructure needs. This is an outcome of the state's approach to distribution energy revenue.

North Dakota guarantees a relatively small amount of direct distribution of total oil revenue to local governments in the form of legislated local tax collections, direct distributions, or dedicated energy impact grants. In North Dakota in FY 2011, only 7.9 percent of oil tax revenue was distributed directly to local governments. Changes made in the 2011 legislative session will increase the state's mandated direct contributions to 11.2 percent of total projected revenue. By comparison, communities in Montana receive about 39 percent of all state production tax revenue. These shares fall short of distributions in Colorado (63%) and Wyoming (69%).¹¹

To compensate for the state's low direct distribution threshold, the Governor's office and state legislature will direct \$1.2 billion to energy-impacted counties in 2012 and 2013, about 59 percent of total projected oil revenue of \$2 billion over the same period. Most of these dollars, \$850 million, will be in the form of one-time transportation, water, and housing grants and tax incentives. While these one-time transfers are

significant, communities do not receive the certainty from a biennial appropriations process that they would from a system of direct distributions based on clear impact metrics and a tax policy that recognizes the unique needs of oil-impacted communities. If drilling continues for 15 to 25 years, community impact funding will be exposed to the political uncertainty imposed by ten or more biennial legislative sessions as local communities rely on the state legislature and the Governor's office for grants and revenue distributions.

Unevenness in where revenue is distributed and where impacts occur can be one of the main reasons that mitigation efforts fall short. Both Montana and North Dakota make distributions largely on the location of actual oilfield development activity (typically to county governments). This policy works to the disadvantage of larger population centers to which workers and their families gravitate, bringing with them rapid increases in service demands, housing shortages, and other social impacts. Some areas can compensate with local option sales taxes, but this places the burden of oil-related costs onto the entire population and is politically uncertain as local levies and taxes are often voted down.¹²

Fiscal Policy in Montana and North Dakota: Volatility

Energy taxes and royalties are based on production value, which can be highly volatile. As a result, energy revenue can be highly volatile, too. Providing services from an uncertain revenue stream makes long-term fiscal planning difficult, and can be risky particularly for rural counties and small towns. Tax structure has an important dampening or exaggerating effect on revenue volatility, so states have the ability to bring greater predictability to their revenue stream.

Tax rates and incentives tied to production volume or price will exaggerate volatility (e.g., North Dakota's incentive tax rate is tied to a price trigger). State grant funds and permanent investment funds can build a long-term and a more stable revenue stream and provide flexibility to make up revenue gaps for communities. North Dakota has initiated a permanent fund that will start making distributions in 2017. Montana has no permanent savings and relatively small impacts grants program. In the short term, neither state has significant policies or savings to dampen revenue volatility.

Discussion: Improving Fiscal Policy across the Bakken

North Dakota's monthly assessed production taxes do a good job of collecting revenue in a timely manner, and the price trigger means the "tax holiday" incentive rate is not in effect at today's high prices. The state's sales tax

¹⁰ State of Montana Office of Budget and Program Planning. Fiscal Year 2013 Biennium Budget, Section 4. Natural Resource Taxes Revenue Estimates. http://budget.mt.gov/content/execbudgets/2013_Budget/2013B_Docs/Section_04.pdf. (accessed 5/18/2012).

¹¹ Headwaters Economics, 2012. "Benefiting from Unconventional Oil." <http://headwaterseconomics.org/energy/western/unconventional-oil-and-north-dakota-communities/>

¹² This is a key strategy for municipalities in Wyoming. See Headwaters Economics. 2011. "Fossil Fuel Extraction and Western Economies." http://headwaterseconomics.org/wphw/wp-content/uploads/Fossilfuel_West_Report.pdf.



allow local governments to realize revenue from drilling activities and support services as wells are being drilled and fracked. Montana could emulate these policies to reduce the time lag by eliminating the tax holiday and by allowing resource production communities to levy a local-option sales tax, similar to the resort tax or bed tax. Each state could facilitate energy impact planning to anticipate needs, support local impact fees, and use a portion of the state's share for energy impact grants that can help direct money to new boomtowns across the states as industry activity shifts.

Montana distributes significantly more of the state production tax directly back to communities. North Dakota could increase its direct distribution formula to provide more certainty and resources to boomtowns. Direct distributions in both states should consider a dual formula based partially on the location of production, and partially on workforce location to reduce disparities between impact and revenue availability. Colorado's Energy/Mineral Impact Assistance grant program¹³ serves as a useful template for such a direct distribution policy. A state impacts grants program can again help resolve jurisdictional unevenness.

Finally, both states could remove incentives or increase the base tax rate to avoid leaving money on the table. Recall that as a result of the tax holiday, Montana will collect \$800,000 less per well over the first three years of production with no indication that this incentive is effective at increasing drilling or production in the state. (In February 2012, 185 drilling rigs were working in North Dakota, compared to 18 in Montana.¹⁴) North Dakota actually has a tax holiday similar to Montana's, except that it includes a "price trigger" that removes the incentive when oil prices rise above a threshold price (currently around \$60 per barrel).¹⁵ After the price trigger was surpassed in November 2009 and the incentive was no longer available to industry, production in North Dakota more than doubled by February 2012 (monthly production rose from 7.4 to 16.2 million barrels¹⁶) while Montana's production,



which retains a tax holiday, dropped by 14 percent over the same period (monthly production declined from 2.1 to 1.8 million barrels¹⁷).

One of the purposes of a severance tax is to ensure that communities and the state benefit from the depletion of non-renewable resources. The typical mechanism for replacing this wealth is through direct investments in infrastructure, education, economic development, and long-term savings that ensure lasting fiscal benefits.

Higher effective tax rates will allow communities to achieve these goals. Montana is the only state in the West that does not have any sort of permanent investment fund for oil or natural gas revenue. Montana could eliminate or raise the current limit on the Resource Indemnity Trust, a key funding mechanism designed to act as an insurance policy against damages like groundwater contamination. Alternatively, Montana could establish a new permanent fund, similar to the coal tax trust fund, to provide long-term benefit to the state. North Dakota established a permanent fund in September 2011, which has already grown a principle balance of \$446 million by July 2012.

In summary, Montana and North Dakota each have places where fiscal policy could be improved, and the states could learn from each other and their peers across the West. Ideally, the two legislatures would coordinate to ensure that each state overlying the Bakken could adopt similar policies that would benefit industry, and ensure counties experiencing impacts could all benefit.

¹³ See: <http://www.colorado.gov/cs/Satellite/DOLA-Main/CBON/1251594715231>. Accessed 8/14/2012.

¹⁴ Baker Hughes, North American Rotary Rig Count by State, February 2012 Average. http://investor.shareholder.com/bhi/rig_counts/rc_index.cfm.

¹⁵ North Dakota adapted a similar incentive rate for wells drilled between June 2008 and July 2009 to encourage horizontal drilling for oil in the Bakken formation that lowered the base tax rate from 11.5 percent to 7 percent. The tax incentive was subsequently extended permanently during the 2009 legislative session, including a price trigger that makes the incentive effective only when the price of crude oil drops below a threshold price. State of North Dakota, Office of State Tax Commissioner. 2007. Oil Extraction Tax Incentive. <http://www.nd.gov/tax/oilgas/pubs/bakkennewwells.pdf>. State of North Dakota, Office of State Tax Commissioner. Oil Extraction Tax incentive Becomes Ineffective November 1, 2009. <https://www.nd.gov/tax/oilgas/pubs/horizontalnewwellmemo.pdf>.

¹⁶ U.S. Energy Information Administration. North Dakota Field Production of Crude Oil (Thousand Barrels). http://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbbbl_m.htm (accessed 5/17/2012).

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¹⁷ U.S. Energy Information Administration. Montana Field Production of Crude Oil (Thousand Barrels). http://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbbbl_m.htm (accessed 5/17/2012).



The Bakken Energy Tsunami and School Impacts

By *Daniel Farr*

Montana is aptly referred to as the “Treasure State” because of our mineral reserves. As these resources are developed it is imperative that, as a state, we don’t simply cash out on communities being impacted; rather, we need to place these communities in a position of being fiscally able to respond to intense infrastructure needs that result from oil and gas development.

—*Daniel Farr*

Asbestos removed for remodeling and expansion needs in second floor of Central Elementary in Sidney.



Sidney, the second largest city in eastern Montana, is experiencing an economic and cultural shift—all of which is associated with the Bakken. The Bakken is the primary oil and gas formation that lies inside the borders of Western North Dakota and Eastern Montana. Depending on the projections you happen to be reading about the Bakken, recoverable reserves are staggering. These reserves, combined with today’s technology, are driving growth on many different levels, resulting in a tsunami as it relates to regional population growth. This growth corresponds to increases in student enrollment and related impacts for area schools.

Impacts on Area Schools

The Sidney School District is comprised of a K-8 school district and a 9-12 school district. Nestled not far from the epicenter of oil and gas activity, Williston, North Dakota, the school impacts felt during the past two years have been notable due to expansive infrastructures put in place by oil and gas producers. Prior to the past two years, the Sidney Public School District was experiencing a steady decrease in enrollment. In 1981, the K-8 district had an enrollment of 1418 students which dropped to an all-time low of 723 students during the 2010-11 school year. The high school district was experiencing a similar fate with enrollment. With a peak enrollment of 566 students in 1995, the high school district reached its lowest enrollment during the 2011 school year with 362 enrolled students.

School demographics looked very different during the 2011-2012 school year with the addition of 101 new students, most of whom were enrolled in the lower elementary grades. The initial influx of new faces did not diminish with the start of the school year and from September 1, 2011 through the end of May 2012, 184 additional students enrolled. During the same time frame, 150 students exited the system after a somewhat short stay. The current school year appears to mirror the prior school year with 130 new faces on day one of the 2012-2013 school year with the noted loss of 58 students during the summer months.

Where are the students coming from? With the availability of high paying jobs in the oil field, families are moving to the region from everywhere. Many share a nation-wide common story about the economy, lack of jobs, or the loss of a family owned business. Using demographic data for the current school year, of the 130 families new to the District this school year, 89

families moved to Sidney from out-of-state—Florida, Texas, Minnesota, and Oregon to mention a few. The remaining families made a move in-state with relocations from Billings leading the way.

In looking at new student demographics for the 2012-2013 school year, 67 students (51.5 percent) are enrolled in grades K-8 and 63 (48.5 percent) are enrolled at the high school level. Of the 130 students, 52 are considered homeless under the McKinney-Vento Act. Additionally, 20 percent of incoming students are identified for special education services and intervention. What is also evident is that many of the students entering the district have experienced multiple school moves during their educational careers, which has resulted in academic gaps equating to additional academic interventions being needed to help students achieve at grade level. Interventions range from operation of summer and math programs for at-risk elementary students, remediation/support programs (Title I) at the middle and high school levels, and additional classroom interventions by teachers to reach a more heterogeneous group of academic learners.

Student enrollment increases are also being facilitated by other factors associated with oil and gas development in the region. Thirteen separate residential developments have or are seeking city and county approval to break ground. Engineering firms that have sought an impact statement from the school system project a maximum student enrollment impact between 987 and 1052 students. Four of the approved thirteen developments account for approximately 80 percent of projected growth in the next 1-2 years. On face value, this appears absorbable but in reality, today’s schools have lost classroom space to computer labs and to academic support classrooms such as Title I and Special Education rooms. Available classroom space is an issue and the Sidney School District—with two elementary campuses, one middle school, and one high school—is faced with expansion issues. Under existing Montana code and county tax structures (taxable valuation) for oil and gas counties, limitations on bonding capacity for school districts experiencing oil and gas impacts makes facility expansion an area of real concern for the Sidney School District and neighboring schools.

Staffing, Housing, and Salary

Concerns with student enrollment and facility expansion are coupled with staffing, housing and salary issues. Housing and rent inflation regionally have resulted in the typical two-bedroom apartment

renting for \$2000 per month, while a typical RV rental spot is \$795 and higher. For school districts or even for most local business, this type of inflation has resulted in worker shortages as a majority of individuals simply cannot afford these inflated housing rates. Salary inflation for schools and businesses alike has resulted in the constant search for help and competition for the same group of employees who do not work in the oilfield for varied reasons. Consequently, many organizations have to consider foreign exchange worker programs to fill voids. School districts in impacted regions, unlike many businesses who have adjusted salaries through increased consumer pricing, operate with voter approved budgets—fixed budgets that cannot be adjusted. The traditional recruitment and retention models and salary schedules do not work in oil and gas impact regions resulting in personnel shortages in certain critical areas—paraprofessionals, food service, building maintenance and transportation services. With continued enrollment and expansion, recruitment and retention of teaching staff will be as difficult with a first year teacher earning a base salary of \$32,245 in Sidney.

Opportunities and Solutions

To the extent possible, the Sidney School District has addressed these issues through the leasing of housing utilizing a three year lease arrangement with a provider. The cost for a two bedroom apartment will cost the employee roughly \$788 per month and a three bedroom unit will cost about \$1182. Leasing was the most revenue neutral approach for the district while assisting employees with rental rates. Additionally, rather than inflate salary structures, the District has created an impact stipend of \$2.00 per hour for regular hours worked using oil and gas revenue. The impact stipend is payable every quarter provided the employee remains with the District and is dependent upon the District's receipt of oil and gas revenue. This brings a beginning paraprofessionals salary to \$11.50 per hour with the impact stipend. A beginning building maintenance worker would receive \$13.00 per hour with the impact stipend. Impact stipends are dependent upon oil and gas revenues and should oil and gas revenues decrease sharply, stipends can be lessened or eliminated by the district.

As one community member stated about the impacts, "It is the best of times and the worst of times." Montana is aptly referred to as the "Treasure State" because of our mineral reserves. As these resources are developed it is imperative that, as a state, we don't simply cash out on communities being impacted; rather, we need to place these communities in a position of being fiscally able to respond to intense infrastructure needs that result from oil and gas development. It is much like Aesop's fable about the goose with the golden eggs; the countryman in his greed killed the goose and opened it to find nothing.

Communities and schools in regions of impact are better positioned if legislation and policy supports needed infrastructure which in turn supports an expanding workforce, which in turn adds to overall production and tax revenue, which in turn supports the people and students of Montana.

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Playground space is being taken up for new teacher housing at West Side Elementary School in Sidney. Below, the District is considering expansion of West Side Elementary to accommodate student enrollment increase.



Healthy People in Healthy Communities:

A RICHLAND COUNTY INITIATIVE

By Judy LaPan

In recent years, Richland County has been subject to many changes: shifting demographics, an influx of jobs and capital, and a severe strain on local resources and infrastructure. In these changing times we want to ensure that Richland County is able to preserve the heritage and values that it holds dear while addressing issues that promote an even brighter future for the area. Through partnerships developed among many local agencies, organizations and individual residents, a commitment has been made to examine needs in Richland County through a community-building process. The process engages individuals, citizen groups and agencies in addressing community needs through assessment, strategic planning and evaluation. This plan is the promise the citizens of Richland County made to create “Healthy People in Healthy Communities”.

The key factors that make this process successful are:

- Begin the procedure sooner than later
- Use a community planning process that is asset-based
- Designate a diverse group of partners and stakeholders working in collaboration and engaging the many community sectors
- Design and implement an action plan
- Ensure a method of on-going evaluation
- Utilize the MAPP Process

Richland County has engaged in the community-building process for the last six years with the goal of creating a process that meets immediate demands while also planning for a sustainable, economically strong county with a high quality of life.

In 2006, the Richland County Health Department began identifying community needs to strategically plan for the future. A community-focused strategic planning process based on a method called “Mobilizing Action through Partnership and Planning,” or MAPP,

was utilized. We started with this format but adapted parts of the process to fit our community.

Steps in the MAPP Process:

1. We created a steering committee made up of approximately ten individuals that had leadership roles in the community such as mayors, county commissioners, economic development director, school administrators, and the hospital administrator. This group provided direction and leadership for the process.
2. The steering committee organized the process to be inclusive, drawing on the strengths and resources of many organizations and agencies that are required to engage in community assessment and strategic planning. Some examples of organizations that must develop strategic plans are: the hospital’s community health plan to maintain their non-profit status, public health accreditation pre-requisites, county/city growth policies and capital improvements plan, and economic development plans.
3. An AmeriCorps* VISTA volunteer, working with the Horizons Group, wrote a grant that provided the steering committee with funds to implement a telephone survey; the health department and the planning board had town hall meetings in all the communities to gather input; data was provided by several partners; and all the information gathered was used to develop both a county assessment and strategic plan.
4. The steering committee was committed to implementing the plan, forming “action groups” to address various aspects of the strategic plan.
5. The final element of our process included a “State of the Community” County Conference. At this conference, each action group presented their results and received community input. To keep the momentum going, the steering committee hoped that the conference would become an annual event.

Counties, and their communities, are diverse and multi-faceted. Actions limited to only one aspect of a community will not impact overall community change.

—Judy LaPan



Counties, and their communities, are diverse and multi-faceted. Actions limited to only one aspect of a community will not impact overall community change. Thus, any planning process must include as many facets of the community as possible. When looking at sustainable economic development, it is essential that quality of life be an element. This broader community partnering process is guided by the definition of economy and it aims to generate community-based economic enterprises

which address both community and economic goals¹. A good example of this is the development of the Richland County Boys and Girls Club (RCBGC). The community identified a need for an after-school program to decrease the risky behaviors identified in our youth. A diverse group of community members, business leaders and agencies worked together to create the RCBGC. Today the club has not only met the community need but has also created jobs, provided workers with a place for their children to be while they are at work, and provides support to our youth who will eventually become productive members of our community.

An Asset-Based Approach

Additionally, we recommend using an asset-based approach. That means community members not only look at their needs but also the assets that already exist. Every planning process must begin with an assessment of what resources already exist in their community. There are many methods of “asset mapping” and this process is most successful if the group takes a broad look at the community. Einstein said it best with, “For an idea that does not at first sound absurd, there is no hope”. Look at all the community assets even if initially the connection to the issue at hand seems farfetched.

Reviewing assets can improve coordination and reduce duplication of efforts to free up resources and address un-met needs. In these times of economic concerns, it is important to look at our own assets to ensure that they are used as efficiently and effectively as possible. According to John Kretzmann and John McKnight from Northwestern University, all people and all communities are gifted, resourceful and capable – even those most marginalized and disadvantaged by social and economic change². Just the very existence of this community building process is a great example of a community taking their future into their own hands. This process was a grassroots effort developed using tools from elsewhere but implemented entirely by the people that live and work in Richland County. There were enough skills within our community to make this happen. Other examples include coordinating transportation between Richland County in Montana and Williams County in North Dakota. Rather than both hospitals having their own costly dialysis department, the transportation action group created a way to get people to their much needed dialysis appointments in North Dakota.

Taking Action

The most important part of the process is taking action. Richland County formed several action groups to work

- 1 Gunn, Christopher & Gunn, Helen Dayton, 1991, *Reclaiming Capital: Democratic Initiatives and Community Development*, Cornell University Press, Ithaca, NY.
- 2 Kretzmann, John & McKnight, John, 1993, *Building Communities from the Inside Out: A Path Toward Finding and Mobilizing a Community's Assets*, The Asset-Based Community Development Institute, Institute for Policy Research, Northwestern University, Evanston, Illinois.



Community members take part in the 2010 Richland County Conference.

on various aspects of the County strategic plan. The action groups have turned the plan into real solutions. Having active participants results in a process that can be used for many purposes. It can mobilize a large group of people quickly. When the county needed to prepare to assist people living in temporary housing during harsh winter weather, we were able to pull together over 50 people to develop a plan by using the steering committee and related action groups. When legislators were interested in the impact of oil on our community, the action group structure made it easy to gather and present relevant information.

Evaluating Process

The most challenging part of the process is getting people excited about evaluation. We continue to work on how to evaluate our progress. This becomes more important when we are asked to provide data that shows impact and outcomes. Although we have some baseline data, we have learned that it is important to gather information on impacts much earlier in the process. We continue to struggle with population data as the formal data is incorrect because of our rapidly increasing population.

In our experience, an inclusive community-building process is one way to address community issues such as the impact of increased energy production. It does not solve all the problems but gives the public a method of examining the issues and organizing to create community-developed solutions that minimize duplication and maximize resources. The process must have community ownership to engage the public in the solutions and mobilize the assets that already exist in our communities. For policy makers, this process can help identify what is most important to the community; it can provide a mechanism of addressing issues as they arise and plan for those that are on the horizon; and it can assist in finding local solutions to create a community that engages its citizens and utilizes its assets in the most effective manner.

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The Montana Department of Environmental Quality Perspective on Bakken Oil Development



By Steve Kilbreath

Oil was discovered in the Bakken Formation in Elm Coulee just outside of Sidney, Montana in 1996 and the first horizontal wells were drilled in 2000. As drilling technology improved the production started increasing, with total production in Montana hitting 36 million barrels of oil in 2006. Production has decreased slightly to 26 million barrels in 2011. In 2006 the Parshall Field was discovered in North Dakota and drilling rapidly expanded to the point of keeping approximately 200 drill rigs busy with total production in excess of 150,000,000 barrels of oil per year. North Dakota has far outgrown Montana in terms of production and drilling.

With the increase of drilling activity in North Dakota and Montana comes a flood of people to work in the industry. This population influx creates impacts to the communities involved in the development area. The focus of this article will be on the impacts seen on the Montana side of the Bakken oil development that are regulated by the Montana Department of Environmental Quality (MDEQ). Staff from the Subdivision and Public Water Supply Program conducted a series of meetings in mid-winter of 2012 in eastern Montana and along the Rocky Mountain Front. These meetings were oriented towards growth, development, and water quality issues associated with oil and gas development in Montana. After these meetings it became apparent to MDEQ that we needed to be more involved in eastern Montana, so the Department dedicated one engineer to do all the reviews of subdivisions and public water supply systems in the impacted counties. Our engineer spends two days a month in the eastern part of the state working directly with developers and county officials. In addition, MDEQ created a position dedicated to coordination of our agency activities in eastern Montana.

The Permitting Process

All activities related to oil exploration, drilling, hydraulic fracturing, production, and underground injection wells are regulated by the Board of Oil and Gas Conservation, a branch of the Montana Department of Natural Resources and Conservation. MDEQ is in an interesting position in that we have almost no direct permitting authority associated with

oil and gas development in Montana.

The closest we get to a direct permitting process is for the air pollutant discharge from well production equipment once the well has been drilled and is placed into production. Early in the development of the Elm Coulee field outside of Sidney, we recognized that there was a significant need to streamline our air permitting program. We had approximately 30 permitted oil and gas facilities and 600 applications for permits. The workload was impossible to manage. In the 2003 and 2005 legislative sessions the Montana Legislature passed HB 700, which created a registration program, and then SB 95 that required oil and gas facilities to become registered within 60 days of being placed into production. The registration program contains the same emission controls and record keeping that an air quality permit contains except that companies complete a registration form and submit it within 60 days of the well being placed into production. The registration program completely streamlined the permitting process and to date has registered close to 1,100 sites for air pollutants.

Housing Regulations

The largest and most difficult issue that MDEQ and local government is facing associated with the increase in oil activity in eastern Montana is due to increased numbers of people seeking work. In other words, “Now that I have a job in the Bakken, where am I going to live?” There are two styles of housing that we are dealing with—temporary workforce housing and permanent work force housing—and each has very different planning and review issues. It should be noted that there are two subdivision review processes in Montana that ultimately will regulate most of the different types of housing developments. The Subdivision and Platting Act is administered by local government, typically a planning department, planning board, and board of County Commissioners and determines the nuts and bolts of how a subdivision is put together and its impacts on local services. The Sanitation in Subdivisions Act is administered by the Montana Department of Environmental Quality and this review is directed at drinking water, wastewater treatment, solid waste, and storm drainage. All of the

New work camp in Sheridan County with bunkhouse-style housing.



housing developments that reach the threshold of serving 25 people for 60 days out of the year will also fall under the Public Water Supply Act and will be reviewed by MDEQ as public water and wastewater treatment systems.

Temporary Workforce Housing

- **Work Camps.** These are employer-provided housing for employees and are the typical dormitory style housing units with central commissaries for meals. They are constructed off site and trucked in. These units have fairly strict rules with good financial backing and typically do not create a lot of problems from community and regulatory review standards. True work camps do not create space for rent or lease so they have no review under the Sanitation in Subdivisions Act and are only reviewed under the Public Water Supply Act for water supply and wastewater treatment.
- **RV Parks.** This is the most prevalent type of temporary workforce housing in eastern Montana and is subject to both local and State subdivision review. These are the most difficult to deal with because most of the parks are already built and occupied when they come in for review. It is also worth noting that only a few of them are coming in voluntarily for review. Another interesting fact is that they tend to change numbers of sites and size during review as units are being rapidly added. RV parking spots bring from \$500 to \$1200 per month rent so the readily available cash flow makes them an attractive business addition to the local residents. As you approach the major work centers in eastern Montana the numbers of RVs increase. RV parks place a huge burden on local government due to the review process and the additional services such as solid waste and sewage required. Most of the sewage is dealt with by local pumpers and in the past has been hauled to the cities for disposal in their wastewater treatment systems.
- **Room rentals.** This is an under-quantified but probably very significant temporary work force component, and this type of housing gets no state or local review. Many of the residents in the impacted communities are renting out a room or a basement in their home for extra income. These additional residents are hard to measure and quantify but there is a definite impact to city services, most notably water, sewer, and solid waste.
- **Hotels and Motels.** New structures are being constructed to house the temporary workforce and are adding impacts to city infrastructure. These units must go through both state and local review.

Permanent Housing

- As the oil drilling progresses and exploration changes to production, permanent jobs are created within the oil infrastructure that bring families into the communities. The families are living in subdivisions, mobile home courts, and apartments. These permanent housing facilities have to go through detailed local review and state review

for water, wastewater, and storm drainage. This permanent style of housing impacts water, sewer, and solid waste for the communities.

The single largest issue associated with the temporary and permanent growth facing eastern Montana is proper wastewater treatment and disposal. Most of the communities have older lagoon treatment systems that are nearing or have reached their original design capacity and life span. These wastewater systems have served the communities well and are in need of upgrades to be able to serve them into the future. The cost of the needed improvements will be a major obstacle facing the communities in eastern Montana and more than likely will require a concerted legislative effort to help out in the upcoming session. The smaller communities should look to the recent developments in Bainville as an example for a way to move forward. The two companies building and operating a major rail loading facility for frack sand are working with the community to build and finance a new lagoon that will double the town wastewater treatment capacity and treat the wastewater from their own 350 person work camp. This is a development model that should be followed in other areas—the companies have the resources to help the communities and in reality it is probably faster and easier for them to improve the community wastewater treatment facilities than to get their own facilities permitted on-site.

We are slowly overcoming some of the difficulties and making headway in working with the Bakken region, but there is a long ways to go as drilling production continues. It is difficult being in western Montana and understanding what is happening out east when the prevailing sentiment is that it is easier to drive from Sidney to Helena than from Helena to Sidney. We have been making progress because we have been out in the communities and getting to know the people in local government. This way we are a face instead of just a voice on the phone or a signature on a letter.

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The largest and most difficult issue that MDEQ and local government is facing associated with the increase in oil activity in eastern Montana is due to increased numbers of people seeking work. In other words, "Now that I have a job in the Bakken where am I going to live?"

—Steve Kilbreath

Temporary housing in
Fairview, Montana.





Land Use Planning Impacts in Eastern Montana:

RESULT OF RENEWED OIL & GAS DEVELOPMENT IN THE BAKKEN

by Allison Mouch

Renewed oil and gas development in the Bakken, a geological formation rich with oil reserves centered in northwest North Dakota and stretching north into Canada and west into Montana, has had a significant impact on community growth and development throughout eastern Montana over the past 18 months. While most residents in the area generally welcome the renewed economic investment in their communities, the demands such growth places on a community can be overwhelming. From the need for additional housing to the increased strain on public services, utilities, and infrastructure, the Bakken Boom has elevated the topic of land use – and planning for the impacts of growth – to the forefront of the conversation.

Assistance through the Montana Department of Commerce

The Community Technical Assistance Program (CTAP), housed within the Montana Department of Commerce, is statutorily charged with providing land use and planning guidance and assistance to local governments, boards, community organizations, and the private sector statewide. Over the past year, CTAP staff experienced a sharp increase in technical assistance requests from eastern Montana communities related to the expansion of oil and gas development in the state. To better understand the issues, CTAP met with 24 eastern Montana municipalities and counties in early 2012 to discuss local concerns about, impacts of, and readiness for oil development in the area. All of the jurisdictions visited are either beginning to experience or anticipate impacts from the oil and gas development currently underway, and are in the early stages of considering how land use planning tools may assist them in addressing the associated growth in their communities.

Housing

One of the primary concerns identified by the jurisdictions visited is the cost and availability of housing. As the demand for both temporary and permanent housing rises, the cost of housing in many communities has increased significantly, resulting in a lack of affordable housing for incoming oil industry workers as well as the local public service workforce including teachers, police officers, firefighters and

service industry workers. The rising cost of housing has also had a considerable impact on the elderly and those living on a fixed income, forcing many residents out of their leases and sometimes out of the area altogether.

In addition, many jurisdictions are experiencing an influx of recreational vehicle (RV), mobile home, and other types of temporary housing located in old RV parks, mobile home parks, on vacant land, and even on existing and already developed residential and commercial lots. While these developments are often necessary to accommodate a growing workforce directly related to the oil and gas industry, many communities have concerns about the safety of these units and the availability of water, sewer, and other public services (law enforcement, solid waste disposal, schools, fire protection, etc.) for the residents occupying these types of developments. Other jurisdictions simply do not want to see a proliferation of this type of housing in their community.

Public Services and Utilities

Communities in the Bakken region are also struggling to continue providing adequate public services and utilities to increased populations. Large-scale residential development, whether in the form of traditional subdivisions or workforce housing for transient industry operations, requires water, wastewater and stormwater facilities be built, sized and permitted in accordance with state regulations. Such regulations ensure public health and safety standards are met and a community has the capacity to serve the amount of growth anticipated. Many eastern Montana communities have aging public water and wastewater systems that are either fast approaching or already exceed their permitted capacity, and service system expansions are costly and time-consuming. Significant population growth also results in an increased need for police, fire, emergency medical, and education providers. Sheriff and police departments have been overwhelmed with the increased service demands resulting from the growing and often transient population; health centers are experiencing increased emergency room visits; schools must educate more students in aging facilities with limited resources. New hires in these services, once successfully recruited to work in the service industry as opposed to the competing and well-paying oil industry, must also be provided with safe and affordable housing in an already tight real estate market.

Additional employee lodging notice outside Williston, North Dakota.



Transportation

Another major impact associated with oil and gas development is the impact this type of development has on the existing transportation network. Truck traffic – particularly heavy, multi-trailer, semi-truck traffic – is taking a significant toll on county roads, city streets and state highways that were not designed for such loads. Local road and bridge departments cannot keep up with the maintenance required, and many have neither the financial resources nor staff to do the work necessary to keep roads up to current, much less adopted, standards. In addition, most Montana Main Streets double as state highways, resulting in heavy truck traffic running through the center of communities – a quick visit to Sidney or Fairview, MT offers a perfect example of this all-too-frequent scenario. This type and amount of traffic not only presents a safety issue but contributes to noise, air quality, and other nuisance issues for town residents.

Trainings and Workshops

There are various land use planning tools and strategies available for communities to address rapid population growth, such as zoning, impact fees, annexation requirements and subdivision development standards. The critical component of all land use planning is local community buy-in: the tools and strategies adopted by a community must be supported by and reflect the desires and needs of that community. Since many of the communities in eastern Montana have never had a need for these documents before, there has been little discussion about what types of land use tools are appropriate or necessary.

To help with local consideration of comprehensive planning and implementation strategies, CTAP will continue to provide technical assistance to eastern Montana communities impacted by oil and gas development through a range of services and training opportunities over the upcoming year. Following the initial visits in early 2012, CTAP partnered with Eastern Plains Economic Development Corporation (EPEDC) and Great Northern Development Corporation (GNDC) to hire additional land use planning consultants to assist CTAP in its efforts. With the additional manpower, CTAP has bolstered its capacity to conduct free workshops and training sessions for planners, elected officials and other interested parties to educate and inform them on major subdivision review, subdivision exemptions, annexation, zoning and conditional use permits, the structure of land use planning in Montana, ensuring public participation, and open meeting law. Four workshops were held between April and September 2012, with a fifth workshop currently scheduled for December. During a recent workshop CTAP partnered with the Montana Department of Environmental Quality (MDEQ) to provide information on sanitation and subdivision review, as requested by workshop attendees. CTAP is committed to providing additional workshops as long as interest continues, focusing on topics identified by participants as ongoing areas of concern.

A range of model land use planning documents have been developed as well: an annexation policy for municipalities wanting to understand the process and requirements under statute; and a workforce housing conditional use permit ordinance for communities interested in interim or permanent zoning to guide the location of workforce housing. CTAP is also working to update the model subdivision regulations and provide a model fee schedule and other guidance documents, as appropriate, to assist communities in addressing the growth and development occurring in their areas. These documents provide counties and municipalities with additional methods for reviewing the land use and community impacts associated with rapid industry growth.

Summary

CTAP continues to provide daily assistance to eastern Montana communities, as well as communities throughout the state seeking land use planning guidance and advice. Grant funding opportunities for both planning and public facilities are available to communities through the Department of Commerce's Community Development Division, as well as other divisions and department statewide. Planning grant funds can assist communities in long range planning efforts related to community development, infrastructure planning, schools and public facilities planning as well as downtown revitalization and historic preservation; project grant funds can assist communities in the design and construction of public infrastructure and public facilities improvements in many of these same areas. Communities interested in finding out more about available planning and project grant opportunities and the application process should contact the Community Development Division at (406) 841-2770.

With the use of comprehensive planning tools and having implementation strategies in place that reflect the needs and desires of each community, eastern Montana will be able to enjoy economic growth and genuinely welcome the Bakken Boom to its beautiful new home.

The critical component of all land use planning is local community buy-in: the tools and strategies adopted by a community must be supported by and reflect the desires and needs of that community.

—Allison Mouch

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New hotel construction in Sidney, Montana, with temporary workforce housing in foreground.



The Bakken:

WITH PROSPERITY COMES CHALLENGE

By Anthony Preite



Because most rural communities cannot afford high-priced consultants and often have personnel wearing many different hats, it's very important that communities take full advantage of the local development organizations that are already in place.

—Anthony Preite

The historic and precipitous growth of energy development in northeastern Montana is providing much-needed tax revenues and higher paying jobs to this long economically stagnant area of Montana. However, with this recent booming development come many immediate challenges. The paramount mission is to seek the most prudent and productive methods of addressing and alleviating these challenges so that all of the opportunities can be fully embraced. This takes teamwork and the pooling of a variety of resources at every level.

I was asked by Senator Max Baucus in April of 2012 to help coordinate efforts to ensure that full attention be given to assure that federal programs be made readily available to alleviate the many problems associated with the areas experiencing the recent energy development boom.

I've been working with Liz Ching and other members of Senator Baucus' staff to create a process that includes meeting with local decision makers throughout the Bakken region. These local leaders help identify available resources to put communities in the best position possible to fully embrace the economic boom afforded by the teeming oil and gas industry. Because most rural communities cannot afford high-priced consultants and often have personnel wearing many different hats, it's very important that communities take full advantage of the local development organizations that are already in place.

This is made possible because all counties and entities within are served by professional multi-county organizations. Richland County is assisted by a local development organization (LDO). All other fifteen counties are served by three multi-county organizations. The U.S. Department of Commerce through the Economic Development Administration (EDA) and the Montana Department of Commerce (MT DOC) provides funding and local entities, both public and private, provide matching funds.

These multi-county Development Districts, (EDDS) and Certified Regional Development Corporations, (CRDCS) as well as the Richland County Local Development Organization (LDO), are all governed through a local board of directors. With scarce local planning funds, they provide an invaluable service. It is not only prudent, but imperative that these organizations be utilized on a very frequent basis.

The Town Meeting Process

Open town meetings were held throughout eastern Montana. Attendees were free to discuss all aspects of the current area situation. As I traveled the region over

the last several months, three main themes emerged during the meetings:

- 1. Tax royalty distribution formula** – Many feel that cities and towns most affected by the oil and gas boom should receive revenues to specifically address impacts of this energy development in terms of planning, water and sewer systems, housing, education, and training. At the same time, no one has suggested that the current distribution to counties and local school districts be reduced.
- 2. Tax holiday** – I have heard interest in adjusting Montana's oil and gas revenue collection and distribution to conform more closely to the North Dakota model. However, most stated that no action should be taken to reduce exploration. The North Dakota model is based on the market price per barrel of oil.
- 3. Long term planning** – Because so many indications point to a long life expectancy for the current energy exploration, many individuals desire a long term planning process that gives top priority to health, education, and safety needs.

In order to meet these challenges, local officials must prepare and pursue an aggressive agenda. It must be understood that local capacity to meet the above mentioned needs is limited since changes in tax structure require cross-sector approval and coordination with state and federal authorities. Available State and Federal resources are insufficient and in some cases diminishing, making it a necessity to coordinate efforts with private sector investment.

New Coalition and Funding Opportunities

Recognizing the importance of developing a long term sustainable strategy, Senator Baucus supported the formation of the Eastern Montana coalition (the comprising of three area CRDCs/EDDs and Richland county development). The coalition submitted an application for comprehensive planning funds to the Economic Development Administration and the Montana Department of Commerce and was awarded \$232,000 and \$128,000 in grant requests, respectively. Local contributions of \$20,000 supplemented the grant. These funds are to be utilized over the next two years.

State programs such as the Treasure State Endowment Program (TSEP) should see increased funding. TSEP has been very beneficial as a funding source to Montana cities and counties. However, the demand far exceeds the TSEP budget. TSEP is a program that requires legislative review of all projects recommended to be



funded by the Montana Department of Commerce. In many ways legislative review is appropriate since it keeps legislators informed and involved. However, TSEP takes a minimum of three years for approval after the initial request for funding is submitted. This excessive time lapse is detrimental to an orderly project process. In many cases, with the three or more years of elapsed time the project cost will have risen significantly since the proposal was submitted. The 2013-14 Montana Legislature should address this situation.

The U.S. Department of Commerce Economic Development Administration has additional programs that would benefit from scrutiny and amendment. For example, the EDA does not recognize “sudden and severe” in-migration as economic distress as is the current situation with Sidney and other Bakken communities. Senator Baucus has asked various federal agencies such as the EDA to recognize this influx as economic distress so communities affected can apply for funding to address their problems.

Education Commitments

It is widely recognized that job creation in a boom economy often means a large number of those currently employed are from out of state. Officials of Montana units of higher education are aggressively addressing this situation. These officials recognize that in many circumstances, special skills are a requirement in filling higher wage jobs.

Led by Stefani Hicswa, President of Miles Community College, and James Limbaugh, Chancellor at Montana State University Northern in Havre, units of higher education have partnered to develop the Eastern Montana Energy Workforce Development Initiative. They have produced a document that describes the combined curriculum of all Montana units of higher education as it relates to the job requirement needs of employment in the oil patch. The rollout and presentation of this document to industry leaders was held at Miles Community College in Miles City on September 13th, 2012, with more than one hundred people in attendance.

Senator Baucus has supported this initiative, saying “This is truly a Montana solution for Montana jobs because we want to see energy companies and related industries hiring workers who are trained and educated right here in Montana. This initiative sends a message far and wide that Montana is proactively working to rewrite the cycle of boom and bust.”¹

One distinct outcome of the conversations that have taken place across eastern Montana is that it is imperative that everyone in the region pull together to present a united front. The private sector will drive the economy. Every effort must be made by the public sector to provide the necessary infrastructure

and job skills that will ensure that area communities can compete on a level playing field. From Kalispell to Bozeman, Lewistown, Great Falls and Billings, Montanans are reaping the benefits of jobs and tax revenues into our state’s general fund. Eastern Montana is represented by many hard working conscientious legislators. Action must be immediately undertaken in order to present a united comprehensive statement of proposed action to the Montana Legislature when they meet, starting on the first legislative day in January 2013. This action should include Eastern Montana legislators preparing the needed legislation that will address area challenges.

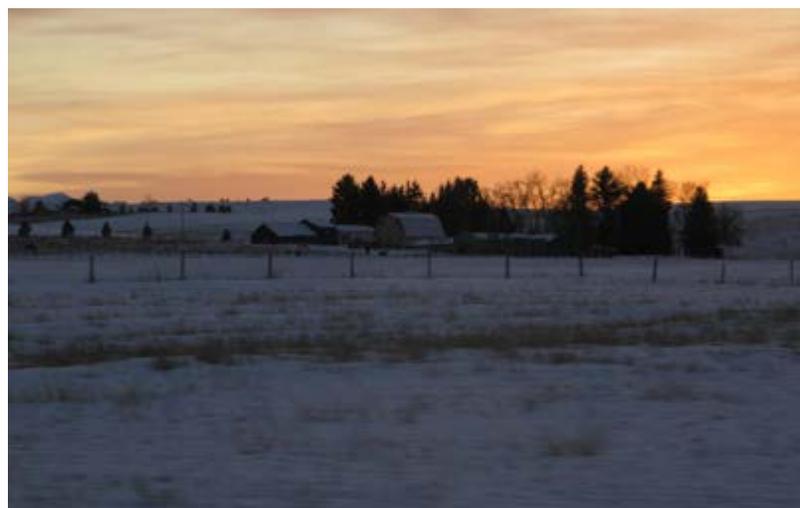
These challenges present a unique opportunity for Montanans to work together to address the consequences of rapid growth. The long term benefits will be well worth the effort.

I am grateful to Senator Baucus, Montana State University Northern Chancellor James Limbaugh, and Matt Jones, Montana State Rural Development Director, for supporting me in performing these duties. I have for many years worked closely with the people of Northeastern Montana and it has been a distinct pleasure. We are committed to continue this beneficial relationship to ensure their voices will not only be heard but acted upon in a timely manner. They deserve no less.

The private sector will drive the economy. Every effort must be made by the public sector to provide the necessary infrastructure and job skills that will ensure that area communities can compete on a level playing field.

—Anthony Preite

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¹ The Workforce Training You Need – Right Here in Montana. Publication of the Eastern Montana Energy Workforce Development Initiative.

Planning Across Borders in the Bakken



by Brent Moore

My Hometown

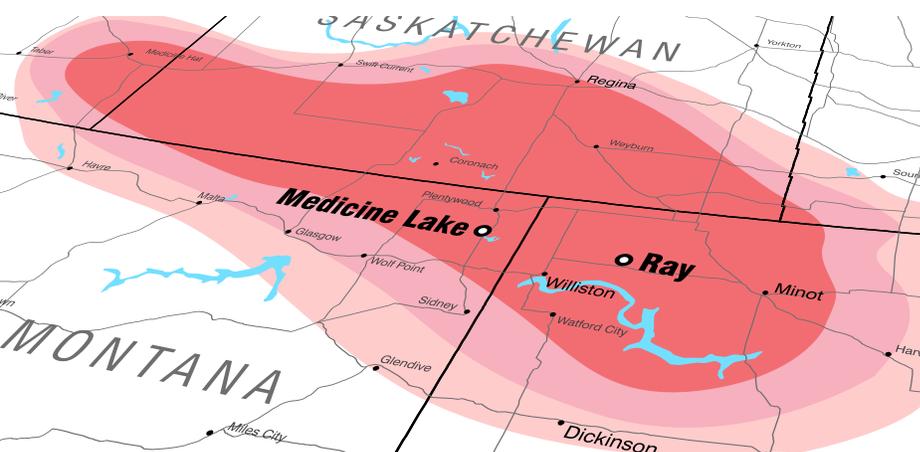
I was raised in Medicine Lake, Montana, and left. It's not that unique of a story for a small town Montana boy. What is unique is I now find myself back providing consulting services as a community planner, helping communities in the region respond to a boom that few would have predicted. Over a year ago, I took off in my car in Red Lodge, MT, where I now live, and headed out to where I grew up. I had an invitation from several communities who were beginning to experience substantial impacts from the current boom in the Bakken. They needed help.

It was April of 2011, and spring was around the corner. I was looking forward to seeing the early signs of green peeking out from beneath a heavy cover of snow. Springtime and early summer in the northeast corner of Montana beckon with a certain sense of nostalgia. It wasn't yet time for wildflowers to be in bloom, but new growth was in the air.

Ray, North Dakota

The final destination for this trip was the town of Ray, ND. Ray is located just north of Williston, and is a small agricultural community of around 450 residents. It had been years since passing through Ray, but I was eager to meet with local officials and discuss their vision for the future. As I passed through Williston, I only began to get a sense of the immediacy of the current boom and the scope. New buildings were being formed on the edge of town, pipelines were going into the ground, and lines of trucks stretched from one end of town to the next. I drove through quickly.

Medicine Lake, Montana, and Ray, North Dakota, lie in the oil-rich Bakken shale formation, which stretches across the two states and most of southern Saskatchewan.



Ray was not entirely as I remembered it. Ray is on the primary access route in the region, which connects Minot to Williston and continues across the Hi-Line of Montana. Highway 2 has become a truck highway in Ray, four lanes through the small community. Much like the interstate system and its impacts on traditional neighborhoods in most major cities across the nation, the road bisected the community of Ray, disrupting the neighborhood fabric and driving commercial development away from the downtown area. Moving commerce—the first sign of progress. As I sat down in City Hall, the first words out of the Mayor of Ray's mouth were, "Keep Ray-Ray."

Planning Theory

The five major traditions in planning theory are known by the "heuristic rubric of SITAR, covering the Synoptic (or comprehensive-rational), Incremental, Transactive, Advocacy, and Radical schools of planning thought."¹ These theories frame the decisions we make as practicing planners. Between rational and radical, communities change over time through shifting local politics, economic conditions and environmental factors.

The booming area of the Bakken provides a unique challenge for practicing planners and communities alike. How do we balance current economic growth with long-term sustainability? How do we embrace new opportunities for growing enrollments in our schools when we have seen declining population for the past thirty years? Is zoning a viable tool for managing impacts in counties in Montana? How does a rural fire department fight fires in a four story building without a ladder truck? How many hotels do we need? Where does the waste go? How can we "Keep Ray-Ray?"

These questions are being asked from community to community throughout the Bakken, and each community is taking a different approach to addressing the opportunities and challenges presented by the current boom. There are also efforts underway to think regionally, and at the state level too. Both North Dakota and Montana are beginning to address this issue of growth, or growth on steroids, across agencies and based upon the available resources. A North

1 Barclay M. Hudson, "Comparisons of Current Planning Theories: Counterparts and Contradictions," *Journal of the American Planning Association* (October 1979, Volume 45, Number 4), 387-406.

Dakota delegation even recently visited Norway to better understand how that country manages their oil resources for both short and long term benefits.

This boom seemed to have happened overnight, and it would be dishonest to say that local governments were ahead of the curve. There's a lot of catch-up to do, and the ride continues to move on at a rapid pace. Where will the next best solution develop? How will a regional framework and governance structure be established to assist in coordinating efforts across the multiple jurisdictions? How will each community respond?

Rural Water

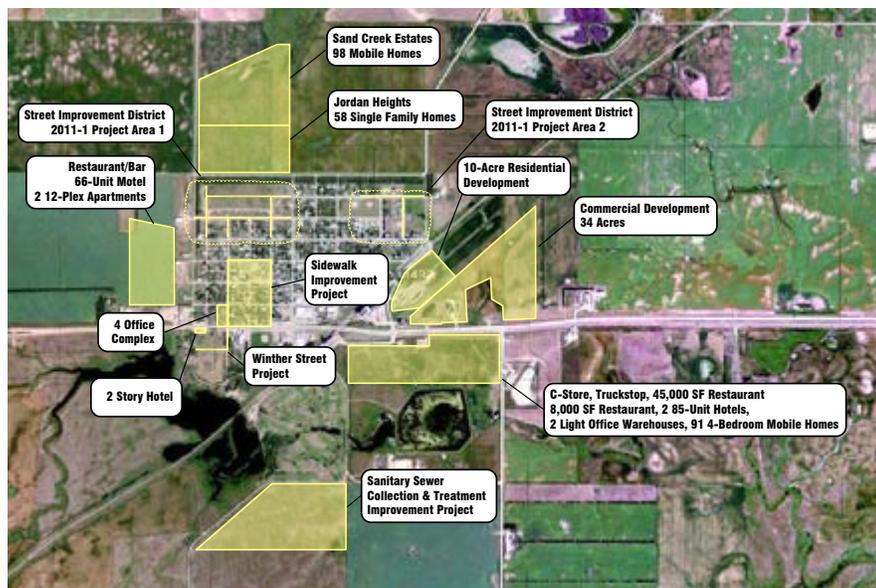
In North Dakota, regional thinking is being driven by rural water. Water has become big business in North Dakota. A large plan is in place and pipes are being laid underground.² The pipes feed rural communities and rural farms, but also industry. Demands for water from the current industry are high, and "making" water is transforming both the real and political landscape as much as the oil rigs drilling into the ground.

These efforts to plan for water allow for current economic expansion and long term sustainability. But do they also contain provisions for impacts to local communities? How do these efforts balance current growth with long-term sustainability? And how can these regional systems provide a framework for thinking regionally?

In Montana, the most active rural water system in this part of the state is the combined Dry Prairie and Assiniboine and Sioux Rural Water System. This system has been designed to provide quality drinking water to rural users throughout the region. Its benefits are defined in terms of construction employment and long-term employment, in better quality water for rural users, and in supporting the agriculture industry in northeast Montana—but no mention of industry.³

Community Planning

The communities in the area of the Bakken face a time of uncertainty. Some have asked for help, and others choose to go it alone for as long as they can. In Ray, some of the help came by way of trained professional planners. CTA has been providing planning services for over a year. What started out as a statement of "Keep Ray-Ray" has turned into the development of a new and improved zoning ordinance, impact fees, and the beginnings of a Comprehensive Master Plan. Current planning has included review of new hotels, single-family residential neighborhoods, mobile home parks, mixed use downtown development, industrial



development and other projects that are projected to drive the population in the community from 450 to 2,000. The community looks to these future projects with cautious optimism, but has in large part embraced the opportunity for growth while working to mitigate impacts through planning as a professional practice.

Current and proposed development projects in Ray, North Dakota.

Medicine Lake, Montana

Which brings me back to my hometown. Medicine Lake is just about 100 miles as the crow flies from Ray. Being in Montana, Medicine Lake has not experienced the magnitude of development activity currently in Ray. Medicine Lake started as a declining community of around 350 residents at the beginning of this boom, and has seen a moderate increase in population. Medicine Lake has chosen a moratorium on new development until wastewater issues can be addressed. Medicine Lake has chosen to be cautious, and even more, to say no.

Medicine Lake is on the edge of a wildlife refuge and wilderness area. The natural beauty of the place is subtle, and takes time to sink in. Like Ray, the place is made of farmers that have suffered through depressions, dust bowl years, aggregation of farms, communism, and other various bumps in its history. The area has seen past booms come and go, and has survived in spite and because of those booms. It's a tenuous love affair, and one sure to create both opportunities and challenges in the future.

This boom is big, and the localized impacts can be long-lasting. There are bright spots, but by and large there are many areas where community members are struggling to define their future under extreme pressure.

—Brent Moore

What have we learned?

Hindsight is 20/20, but communities in Montana are in the unique position of looking across the border to North Dakota, and most do so with a certain measure of concern. This boom is big, and the localized impacts can be long-lasting. There are bright spots, but by and large there are many areas where community

2 Western Area Water Supply Project: <http://www.wawsp.com/WAWSA.asp>.

3 Dry Prairie Rural Water: <http://www.nemontel.net/~dprw/benefits.html>. And Assiniboine & Sioux Rural Water Supply System; <http://www.fortpecktribes.org/asrws/about.htm>.

members are struggling to define their future under extreme pressure. In some areas, long-term community members are moving on, selling out. In Medicine Lake, they have seen lots fill up, RV parks occupied year-round, and even a new subdivision or two proposed. But what more will come? And what planning needs will be met before the boom takes hold?

The conditions in North Dakota are different than Montana. It's an obvious statement which has real implications at the local level. Those implications are immediate in North Dakota. In Montana, many still lie out on the horizon.

Medicine Lake takes a different approach. The community has made the decision to say no more than they say yes. Town leaders have chosen to dig their heels in against the coming storm through application of existing social norms without zoning and other planning tools in place, and I applaud them for their efforts. But as a professional planner, I know too well the intricacies of state and federal laws and how those protect private property rights, and how those rights are balanced with community goals through tools like zoning which codify social norms. Arbitrary decisions without a legal basis are eventually challenged, even given the best intentions.

I know I am not the prodigal son. I know that local communities and local leaders have far more of an ability to influence outcomes and build long-lasting places of value, places that last through time. But I have concerns, and I play a role in assisting communities with challenging issues they face through the practice of professional planning.

As a planning professional, I once thought I would be working in northeastern Montana crafting language and plans to describe an elegant decline. Two professors from Rutgers created a stir many years ago suggesting that the entire Northern Great Plains would be better off converting back to a grasslands predominantly inhabited by Bison.⁴ They posited that the Upper Great Plains should revert to a nature reserve, with smaller

⁴ Popper, Deborah Epstein, and Frank J. Popper. "The Great Plains: From Dust to Dust." *Planning*, (December 1987).

and smaller human populations, in effect, turning back time. They and many others felt this to be inevitable. For the time being, that inevitability is not certain. In fact, the pace of growth moves forward ever more quickly due to the nature of short-term oil leases and volatile gas prices.

How does planning theory inform my practice? I would like to say that rational goals are those I promote at the local level. Incremental changes are out the window in a boom—everything happens immediately. I find myself moving more and more towards transactive and advocacy. Transactive is a fancy word for people working together to decide their future, and it involves constant feedback loops. Advocacy is taking a stand. Somewhere between these two theories, I find myself working an area few of us could imagine experiencing the type of change we see today.

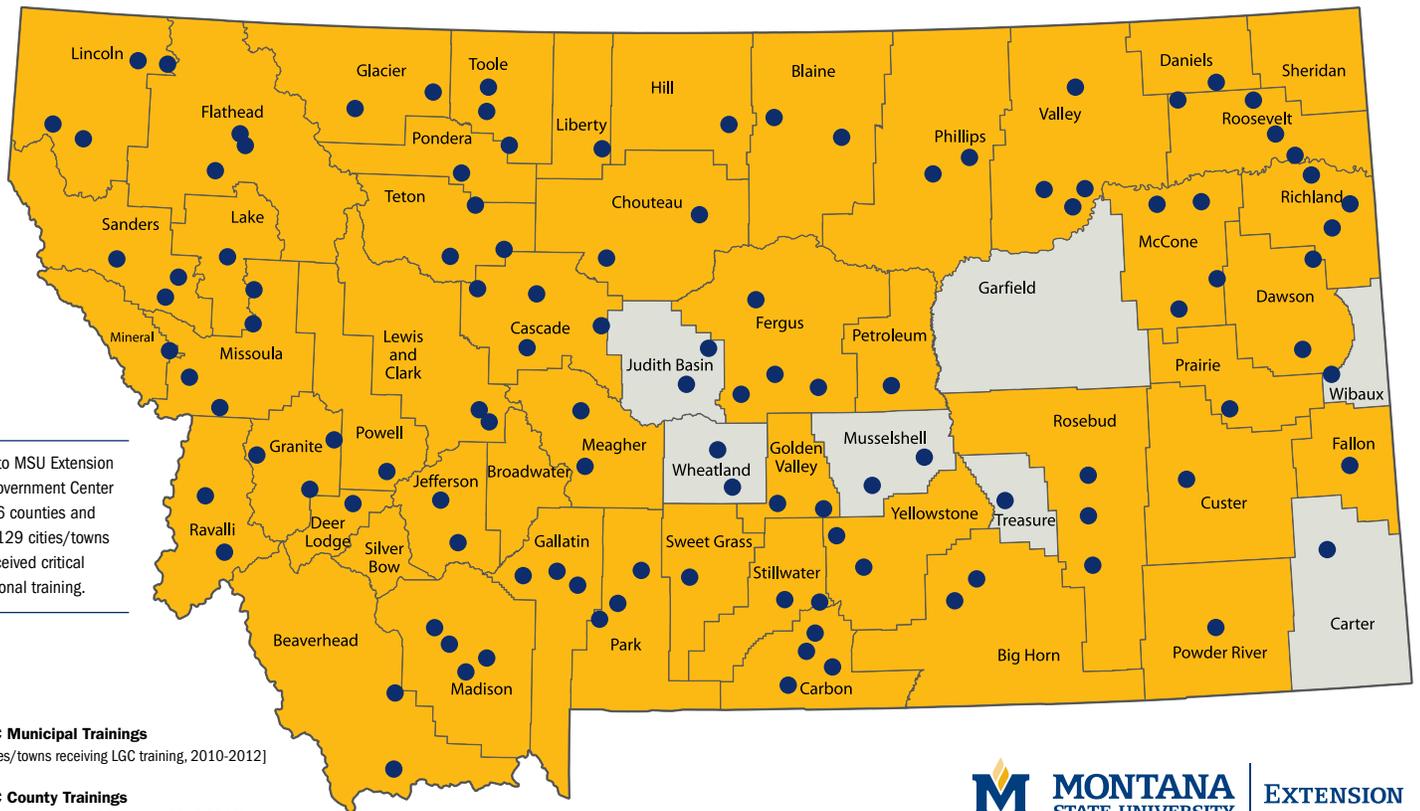
During this boom, communities must define their values and communicate those values to development interests who look to benefit from this economic opportunity. At a minimum, communities should define their top ten needs, and communicate those needs as partners look to capitalize on this unique opportunity for growth. This current boom may be around for a year, five years, or thirty. Through good planning, working with partners, and communicating needs, communities may come out the other end of this boom with a better ability to sustain long-term, healthy places to live, work and play.

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The Medicine Lake National Wildlife Refuge, set aside to protect the region's wildlife heritage, is a major resource in the community.



Making a Difference for Montanans in Their Hometowns and Counties



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