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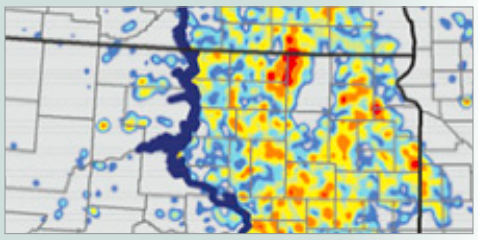
More on the Fiscal Oil Boom …



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… now the real work begins

Still in its infancy, the Bakken oil boom has spawned economic activity and tax revenue scarcely imagined even a few years ago. Now North Dakota is striving for the right balance in addressing short-term needs, fiscal security and long-term economic development

By RONALD A. WIRTZ
Editor

By now, surely you've heard of the oil boom in North Dakota. You know: jobs aplenty, high wages, hefty royalty checks for landowners and crying babies.

Crying babies?

While many obvious economic benefits flow from the Bakken oil boom, it's akin to a newborn baby, who brings excitement and joy to the whole family. But as any parent will attest, there is an awful lot of work involved, from constant feeding and diaper changes to sleepless nights and an endless vigil over the little one's health and safety.

In a similar way, local communities and the state Legislature are realizing that oil production and its concomitant economic activity and wealth come with a laundry list of things to fix and otherwise spend money on, such as crumbling roads, overwhelmed water and sewer systems, packed schools, and shortages of housing and community services like parks and emergency personnel that most people outside the region take for granted.

Connie Sprynczynatyk, executive director of the North Dakota League of Cities, likened the development challenge facing western communities to having a top-10 list of needs, "and all of them being number one." And because oil and gas tax revenue flows first to the Capitol, the state Legislature "is like being a mother of 12 kids, and they all want attention."

Fortunately, state coffers are overflowing from oil and gas tax revenue as well as strong growth—thanks in no small part to oil activity—in sales and income taxes paid by individuals and corporations. In the recently passed budget for 2013-15, total general fund spending is expected to reach $6.9 billion—almost 70 percent more than in the previous biennial budget.

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Fiscal oil boom from page 1

"The state is in an enviable position because it can map its own course," said Nancy Hodur, an economist at North Dakota State University (NDSU) who has done extensive research on the economic activity and effects of the oil boom. "There is tremendous opportunity for economic development if we do this right."

But as is often the case, the devil is in the details. The challenge facing North Dakota is multifaceted. Local communities are begging for financial help to deal with the heavy impacts born from oil and gas development. The sheer scale of activity in the oil patch would itself be a challenge for any region, but it is compounded by the lack of capacity in this rural part of the state and by a state funding system in which the provision of resources to deal with oil-related development can lag on-the-ground effects by two years or more.

Over the past several legislative sessions, lawmakers in Bismarck have unhinged the lid on public spending and crafted a complex allocation system for oil and gas revenues to help local communities deal with immediate impacts while also setting money aside for rainy days, including ones well into the future.

Inevitably, despite the financial largesse, not everyone is happy. The biggest disagreements concern how much money is reaching oil-impacted areas. While such funding has steadily increased, "there is still a pretty significant shortfall. Communities need more help with critical services," said Hodur. "The infrastructure is so undersized, you'd be hard-pressed to overbuild." She noted that U.S. Highway 85 through Williston—the busiest road in the state, carrying "tens of thousands of trucks"—is still a two-lane highway. "It's the deadliest road in the state."

Many oil patch sources concurred with Hodur's assessment. But the state also has to keep an eye on the future if it is to avoid the dreaded "resource curse," where oil discoveries do more harm than good to local and state economies. That means state lawmakers have to worry as much about long-term economic development and diversity as they do about potholes and park benches. That makes for a lot of debate, as Sprynczynatyk has witnessed at the Capitol.

"You could ask six different legislators and get six different opinions" about how oil revenues should be spent, she said. "It's an easier, shorter [legislative] session when there's no money to spend."

A heavy oil footprint

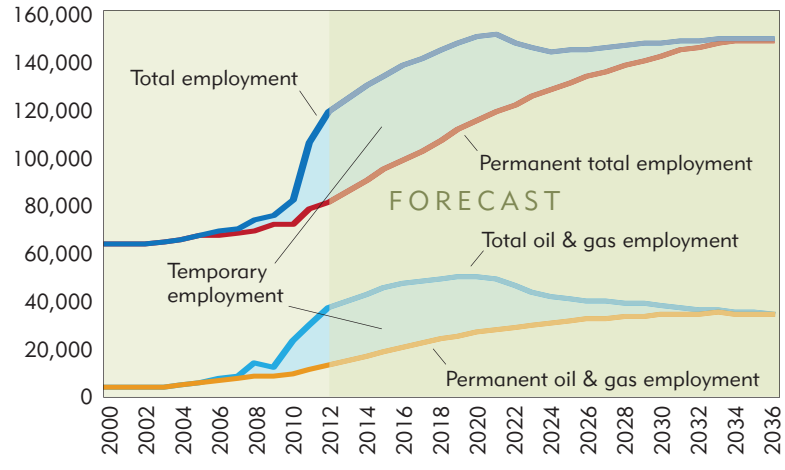
It's easy to see the benefits of oil activity in North Dakota—unemployment rates are exceptionally low, wages are rising strongly and the area is awash in economic activity and, frankly, money. At an April conference, former Montana Gov. Brian Schweitzer called the Bakken "a millionaire maker."

Given less attention—especially outside oil-impacted areas—are negative effects that have accompanied rapid oil and gas development in western North Dakota and eastern Montana. (Montana, for its part, has experienced much less of an oil boom and little of its fiscal benefits, but has experienced considerable impact as a result of being across the border from the Bakken's core production area.)

Chart 1

A gusher of jobs

Total and petroleum sector employment
Forecast for state planning regions
1, 2 and 8 (roughly, the Bakken region)



Source: Agribusiness and Applied Economics, NDSU

The widespread and capital-intensive nature of horizontal drilling and fracking brings more of everything—including more wells, which means more drilling, which means more equipment and supplies of every sort, transported on trucks that are multiplying like jackrabbits.

Development in the region presents bigger challenges for communities built above deep shale formations than comparable development near conventional oil fields. The widespread and capital-intensive nature of horizontal drilling and fracking brings more of everything—including more wells, which means more drilling, which means more equipment and supplies of every sort, transported on trucks that are multiplying like jackrabbits. All of this activity requires more workers, who need housing and other services in sparsely populated regions that are better equipped for prairie dog colonies than residential subdivisions.

Already, the region has created tens of thousands of jobs in the petroleum sector and across the regional economy (see Chart 1). Populations are expanding as workers bring their families or make new ones. From 2000 to 2010, the population of Divide County—in the very northwestern corner of North Dakota—actually fell by 9 percent, to about 2,000. Assuming the current pace of development continues, the county population is projected to double by 2015, and then rise further to about 5,600 by 2020 (see Chart 2).

Sprynczynatyk said it was "difficult to make blanket statements" regarding community impact. "Some communities are overwhelmed. Some have the capacity to respond. All cities have some concerns about infrastructure. … But because North Dakota hasn't always been growing, the capacity isn't there."

What infrastructure is in place was designed to support a fraction of the activity in the region today. Roads, in particular, are taking a beating from convoys of trucks carrying water, frac sand and other supplies to hundreds of well sites. Last year, the Upper Great Plains Transportation Institute identified $521 million in road needs by the end of 2014.

And that's likely just the tip of the oilberg. Dean Bangsund is an economist at NDSU who has worked on several recent Bakken impact studies with Hodur. He noted that the state had about 3,000 to 3,500 active wells before the boom. This spring, there were nearly 9,000, and that's still just the warm-up phase. Estimates from the state Department of Mineral Resources suggest that the total well count will reach 40,000 to 45,000 over the next two decades.

"Now the gorilla is starting to roost. Now there are huge, huge development challenges," said Bangsund. The physical demands and time scale—the breadth of things that need attention, and the time necessary to do them—"is something no one has dealt with."

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One of the Minneapolis Fed's congressionally mandated responsibilities is to gather information on the Ninth District economy. The fedgazette is published quarterly to share that information with the district, which includes Montana, North and South Dakota, Minnesota, northwestern Wisconsin and the Upper Peninsula of Michigan.

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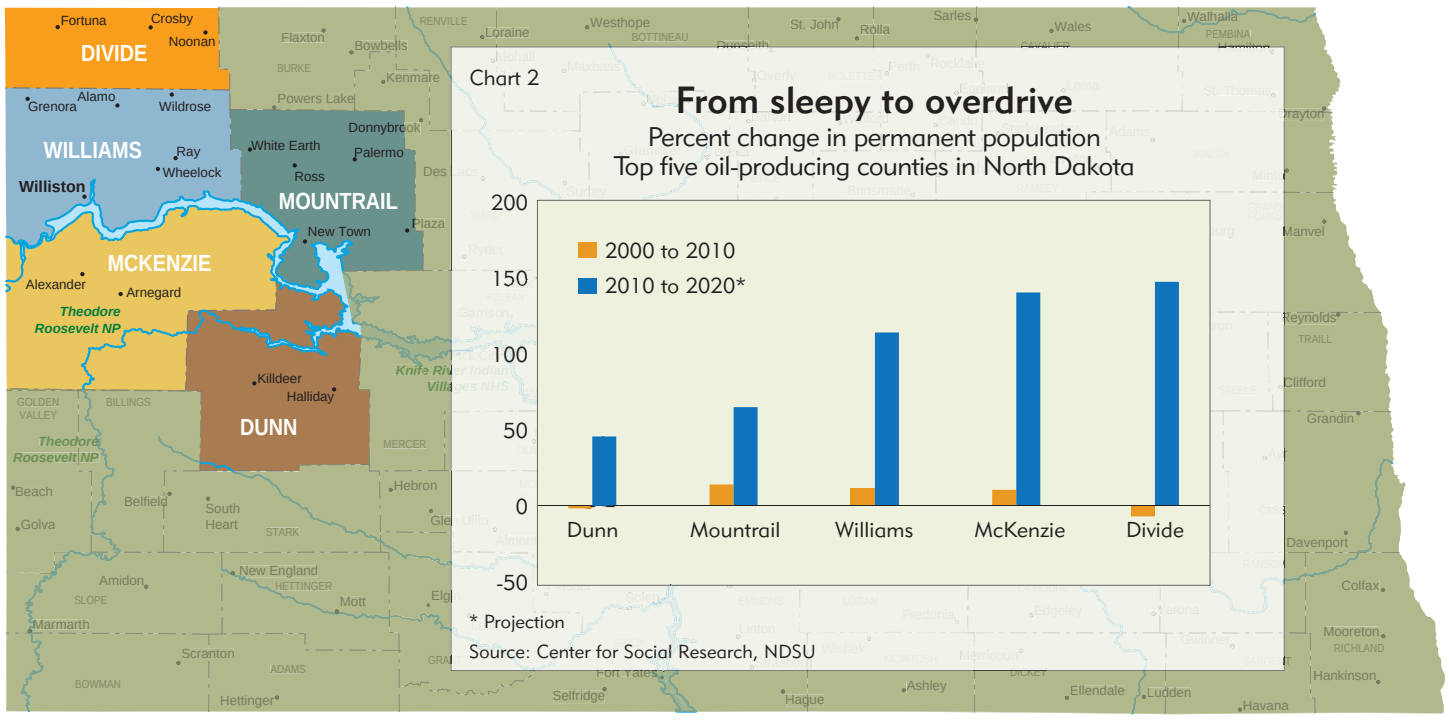


The city of Arnegard "is smack in the middle of the Bakken" with a population just over 100 people. But it has a service population of 1,600. "They don't have public water; their sewer system is overrun and outdated. They were less than underprepared" for the deluge of service demands.

—Deb Nelson
Vision West ND

From Yay! to OMG!

There are several stages of community response to shale oil development, according to Richard Gardner, a consultant with Bootstrap Solutions of Boise, Idaho, and senior fellow at the Rural Policy Research Institute at the University of Missouri. He has done work for communities grappling with the effects of energy development from North Dakota to Pennsylvania to Texas.

Gardner said the first development stage is enthusiasm (we struck oil!), followed by uncertainty (is this for real?), then crisis (we need a plan) and finally adaptation (here's the plan). "Sometime in the last year or two, there has been a transition from uncertainty to crisis," Gardner said.

A population rise of 1 percent to 3 percent per year is considered robust, said Gardner. At 4 percent to 5 percent, "things are busting at the seams," he said. "You've got McKenzie County growing 8 percent per year for the next 10 to 15 years. How can they possibly keep up?" In 1983, school enrollment in the McKenzie County School District was just over 1,000. By 2008, it had slowly eroded to 512. This year, enrollment is back to 868. February estimates by NDSU project school enrollment almost doubling by the 2016-17 school year to more than 1,600 students. In a very rural county, Gardner said, "they have low capacity in everything, and they can't keep up with this."

Oil patch communities also do not have the benefit of time, Gardner said. These communities "are suddenly doing a 180, and they are very rapidly being thrust from a sleepy community to an industrial region overnight."

The response to the boom by individual communities is often uneven, depending on factors like staffing and financial capacity. As local communities race to expand infrastructure and other services, some "are bonded to the gills" and don't have the capacity to take on necessary upgrades to city infrastructure, said John Phillips, a real estate project developer with Lutheran Social Services and former planner for the city of Beulah.

In January, a report commissioned by the city of Williston looked at infrastructure needs six years out. It identified more than $625 million in infrastructure upgrades, including $102 million for storm water, $110 million for drinking and wastewater and $259 million for transportation. The city was rewarded for that planning effort by having its bond rating lowered by Standard & Poor's only months later over fears of projected budget deficits that could deplete cash reserves.

It's even worse for small communities, because it doesn't take much to overwhelm their capacity, and they get very little funding because formula-based state aid goes mostly to counties and regional centers like Williston and Dickinson. So they are left to hope that some aid passes down the ladder from the county, said Deb Nelson, manager, Vision West ND, a 19-county consortium of governments and other interests created expressly to help the region cope with oil impacts.

The city of Arnegard "is smack in the middle of the Bakken" with a population just over 100 people. But it has a service population of 1,600. "They don't have public water; their sewer system is overrun and outdated. They were less than underprepared" for the deluge of service demands, said Nelson. "The needs are so much greater than the funding. Unless you're here and experience it, you don't have a good idea of what's going on."

Hodur, from NDSU, called western North Dakota "a socio-economic petri

Continued on page 4

Oil taxes 101

Oil and gas revenues in North Dakota are generated in several forms. The largest of these comes from an 11.5 percent severance tax on the gross value of oil and gas produced at the wellhead.

This tax is actually two separate taxes; a 6.5 percent extraction tax and a 5 percent production tax. Technically, the production tax is not a severance tax but rather a substitute for local property taxes, and helps fund direct aid to producer counties. However, the percentage of tax revenue that is returned to producer counties is small, and as such it acts more like a severance tax because most of the money stays at the state level.

The state also receives money from oil activity on state-owned land. First, the state receives lease-bonus revenue — one-time payments from producers for exclusive rights to drill on designated parcels of public land. Once production starts, the state (actually, a state trust) earns royalty payments equal to 12.5 percent to 18.75 percent of gross production value, depending on the county of extraction. Producers then pay severance taxes to the state on the remaining percentage of production value. So a $100 barrel of oil produced on state lands in core Bakken counties would incur a royalty payment of 18.75 percent, along with an 11.5 percent state severance tax on the remaining value of $81.25.

Fiscal oil boom from page 3

dish. There's just a lot we don't know" about the scale and impact of oil activity in the region and how to handle it in a way that will provide long-term local and state benefits.

Measuring the full impact of oil development, calculating the costs and planning the necessary community response "is a very difficult process to get your arms around and capture. The issues are bigger than any of us imagined," said Nelson. Efforts to date have identified housing, transportation and roads, water, emergency services and day care as the most pressing needs. But the group has "not yet begun putting together the fiscal impact of any of the top five needs of our region," Nelson said.

The process of identifying just the scale of needs is difficult, to say nothing of calculating costs or planning for implementation. The Upper Great Plains group identified $7 billion in necessary transportation investment over the next 20 years: half in oil-producing counties, half outside. While certainly useful, the number is bound to change; the group's 2010 estimate for two-year road investments grew 50 percent by 2012, the result of an 80 percent increase in projected wells along with rising costs for gravel and pavement.

Estimating both current capacity and long-term need is challenging for any public service. For example, much of the region is served by volunteer emergency and fire services, and reports have shown that volunteer rates are down. "They are running into a large increase in calls, and it's very difficult [for volunteers] to be called out constantly and still hold a full-time job," Nelson said.

But figuring the cost of upgrading emergency response services across the Bakken region is a daunting prospect. Vision West conducted an initial study of emergency services to determine gaps and overlaps. This might sound simple, but the region is "so large and so very rural … [that] we have not been able to put a financial cost to the needs because we haven't been able to fully capture where the gaps are largest, and we haven't yet been able to identify workable solutions for this huge service area," Nelson said.

The group is bringing in experts to help study the matter and is holding a series of symposiums through October in hopes of coordinating regionwide improvements. "What we are experiencing is like drinking from a fire hose. We have to figure out how to make the hose smaller, lower the water pressure or drink faster—all before we drown," Nelson said.

The state has gotten in the laudable habit of squirreling money away in rainy-day and permanent trust funds. It also has been cautious in committing to permanent spending programs, preferring one-time expenditures—much of it to deal with oil impacts—that are not automatically assumed into future budgets.

Gusher of tax revenue

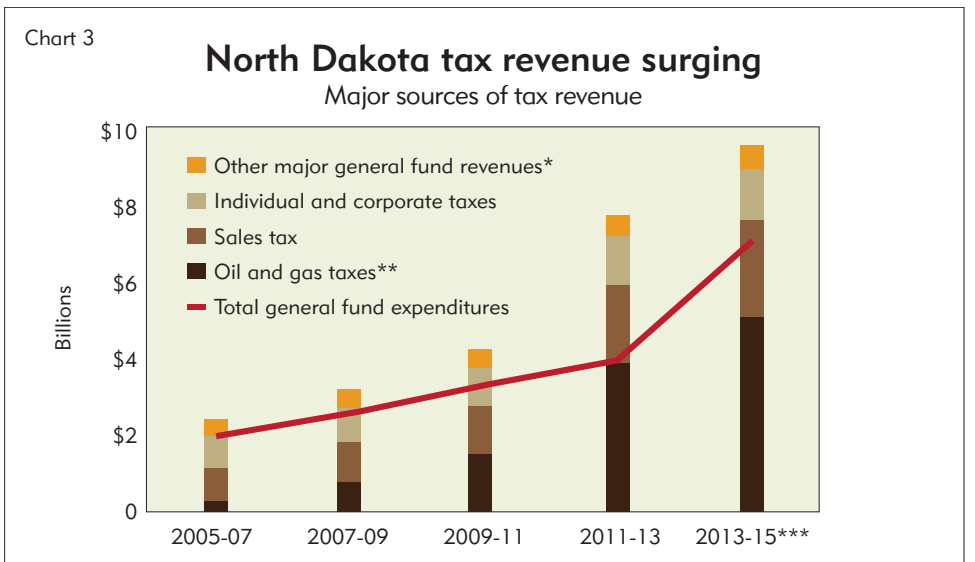
The good news is that North Dakota is brimming with money to address many of its needs.

The role of oil in this is both obvious and subtle. Oil and gas tax revenue has grown at a Himalayan trajectory and comes from an 11.5 percent severance tax (see sidebar on page 3 for explanation). As recently as the 2003-05 biennium, this tax tallied only about $120 million. It's projected to top $5 billion during the 2013–15 biennium (see Chart 3). This amount doesn't include royalty and other revenue from energy production on state-owned lands. In the recent biennium (through early March), this equaled $560 million.

Unbeknownst to many, however, very little of this oil and gas revenue goes directly to the state's general fund, the budget base for government operations. In fact, the general fund can directly receive no more than $300 million per biennium. The rest is distributed through a complex—some might say byzantine—system of allocations that somewhat limits the Legislature's annual decision-making over oil and gas revenues. Some of the money is automatically sent to city, county and tribal governments, while other funding goes to a host of priorities, including property tax relief, grant funding, rainy-day funds and long-term savings (see sidebar on page 6 for more discussion about oil and gas revenue allocations).

Other state tax receipts are also surging (see Chart 3). Sales taxes and income taxes on individuals and corporations, which make up the lion's share of the state general fund, have risen strongly in part from heavy direct and indirect spending that comes from oil development.

Chart 3



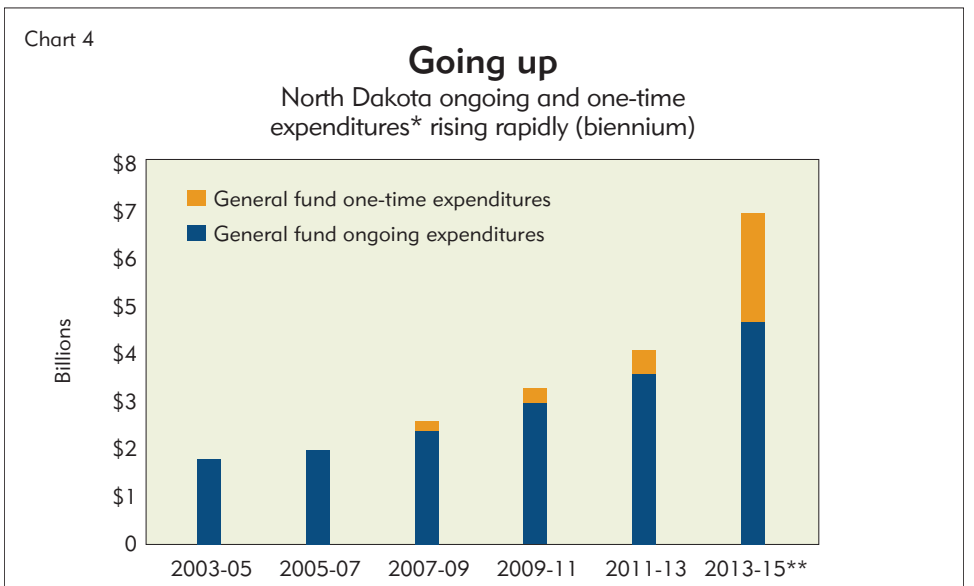
* Excludes contributions from oil and gas taxes

**6.5 percent extraction tax plus 5 percent production tax

*** Estimate

Sources: Oil and gas taxes from the Office of State Tax Commission; sales, income and other taxes from the North Dakota Legislative Council; general fund spending from the Legislative Council, with updated figures for 2011-13 and 2013-15 from the state Office of Management and Budget

Chart 4



* Does not include expenditures from federal revenue

** Estimate

Source: North Dakota Legislative Council, with updated figures for 2011-13 and 2013-15 from the state Office of Management and Budget

Add it all up, and a lot of tax money is flowing to Bismarck—a projected $9.5 billion for the 2013-15 biennium, triple the amount collected in 2007-09. Not surprisingly, general fund spending has swollen as well, to a record $6.9 billion for the coming biennium.

But the state has gotten in the laudable habit of squirreling money away in rainy-day and permanent trust funds (see sidebar on page 6). It also has been cautious in committing to permanent spending programs, preferring one-time expenditures—much of it to deal with oil impacts—that are not automatically assumed into future budgets. In the span of four budgets, the state has gone from zero one-time expenditures to $2.2 billion in the upcoming biennium, according to state sources (see Chart 4).

Say when

How much of that money is reaching the oil patch to expressly deal with oil impacts is hard to determine exactly. But the easy answer is "more."

In the spring, legislators passed a

Once oil and gas are produced—and thus taxed—there has already been considerable damage done to roads and pressure put on other infrastructure and public services. But the funding intended to mitigate those impacts has to wait for the next budget cycle. That means cities and counties are getting money for impacts that happened years earlier.

measure to spend more than $1.1 billion over the next two years for improvements to infrastructure, law enforcement and emergency services, with most of it going to the oil patch. Oil-impacted counties and cities will receive direct aid of $543 million—more than double the amount in the previous budget. The budget also includes $240 million for an oil-impact grant fund, almost double its previous allocation. The state's highway construction budget for the next two years was approved at $878 million, or almost $290 million more than the previous record in 2011, with most of the money earmarked for the oil patch. Overall state spending is also significantly higher, so increases for K-12 education and other fundamental public services will also flow to oil country, though to what degree is hard to track precisely.

Sources inside and outside the oil patch seemed universally pleased to see increased spending in the oil patch. Keith Lund, vice president of the Grand Forks Region Economic Development Corp., pointed out that oil revenue has helped to lower individual and corporate income tax rates statewide and provided property tax relief. The 2013-15 budget alone has $850 million in property tax relief. Corporate income tax rates have been lowered in each of the past four legislative sessions; top rates have gone from 7 percent in 2006 to 4.53 percent.

Maintaining that revenue stream requires ongoing investment, he added. "There are a lot of needs out in the western part of the state, and it has to be supported or it just all stops," Lund said.

But whether it's enough is a hotly debated question. Most sources in the oil patch were unequivocal that recent funding increases—while very helpful—were still insufficient. Many still see needs unmet from previous state budgets. In the legislative sessions of 2009 and 2011, "we thought we had done things to address the oil impact. But it turned out to be woefully inadequate," said Senate Minority Leader Mac Schneider (D-Grand Forks). "We weren't even playing catch-up." Even given the big increases in the newest state budget, "we're not under any delusions. This is not a cure-all [budget]," he said.

Oil patch advocates point out that direct aid to areas impacted by oil is still comparatively low despite the recent increases. In the early part of the decade, the percentage of oil and gas tax revenue sent back to producer counties averaged in the low teens. It increased to 17 percent in the 2011-13 budget and will increase to 21 percent in the coming two years, according to Pam Sharp, director of the state Office of Management and Budget. However, oil patch legislators like Rep. Bob Skarphol (R-Tioga) have pointed out that the state sends 35 percent of coal tax revenues back to producer counties. Sharp confirmed the estimate and said it might be conservative.

A report last year by Headwaters Economics of Bozeman, Mont., pointed out that North Dakota "stands out among its peers for providing the least direct funding for oil-impacted communities." Local governments in Colorado, for example, receive 63 percent directly; in Montana and Wyoming, 39 percent and 35 percent, respectively, according to the report. While direct aid is climbing and "fills an important gap," the report said, "leaving impact assistance to the discretion of state legislatures is not a responsible approach to managing an energy boom."

Because of its sovereign status, the Three Affiliated Tribes was receiving a slightly larger portion (20 percent) of tax revenue from production on the Fort Berthold Reservation than nonreservation counties and cities received over the same period. The state is renegotiating the compact, and revenue sharing is expected to reach a 50/50 split.

Could you send it yesterday?

The timing of funding has also become a major sticking point for oil patch communities.

Once oil and gas are produced—and thus taxed—there has already been considerable damage done to roads and pressure put on other infrastructure and public services. But the funding intended to mitigate those impacts has to wait for the next budget cycle. That means cities and counties are getting money for impacts that happened years earlier.

"The whole political process lags the impacts," said Bangsund, from NDSU, and delay is compounded by the fact that the Legislature meets every other year. "The response on immediate needs has not kept pace. There is a lot of entrenchment and inertia to get past. … More needs to be done on a continual basis," said Bangsund.

Shawn Kessel, Dickinson city administrator, was giving testimony at the Capitol during the spring session, and "one legislator, who shall remain nameless, came up to me afterward and said, 'Shawn, I get it. Thank you. The light has gone on. You guys are making decisions today that are affecting you [financially] now. But you're getting resources tomorrow.'"

Some governments are taking steps to help control development or at least prepare financially for it. Dickinson and many other cities have instituted impact fees on new housing developments to help with road and other associated infrastructure needs. Williston recently instituted a one-cent general sales tax to

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Dickinson:
Watching and learning

At the local level, one city that appears to be coping comparatively well is Dickinson. The city gets occasional visitors from local government officials in Texas, where small cities there are undergoing similar challenges thanks to a shale oil boom in the Eagle Ford Formation of southern Texas. If Dickinson is doing well, part of the reason is because the city is located on the fringe of the Bakken Formation and has not seen the level of oil drilling and related activity experienced in places like Williston. "So we got the benefit of watching and learning," said Shawn Kessel, Dickinson city administrator.

But as a regional hub, it has had to deal with a flood of new people. The city was founded in 1881, and in 2010 the U.S. Census pegged the city's population at about 18,000. By 2012, the population had jumped 50 percent to 26,700. By 2020, NDSU research suggests it could exceed 40,000.

Oil activity "affects every single service we provide as a city," Kessel said, and it's the same story for school districts and Stark County. Kessel said human capital is the biggest challenge for local governments because the impact of a rising population "doesn't hit you all at once. It comes at you in waves, and human capital has to reflect that wave." First comes planning, and then the building department where permitting takes place. Then once more housing is built services like fire and police require more staffing.

In the last few years, the city has added 29 employees, and wages have increased by 10 percent each of the last two years. Before the boom hit, Dickinson was planning a $12 million expansion of its wastewater treatment facilites. After getting the population estimate, "we bit the bullet" and upped the ante on a $48 million expansion.

State aid to regional hubs has increased, but aid formulas are based on old population estimates, and "we're making so many decisions based on how many people will be here in 2020." The city is in line to get nice bump in aid and other grants from the state, to about $33 million. Kessel appreciates that, but added, "we're still woefully underfunded even in this biennium."

Fiscal oil boom from page 5

pay for a gigantic new recreation center and other planned improvements. But similar tax mechanisms are not easily available for many public services, like schools and law enforcement, and many small communities lack the staffing to implement and enforce impact fees.

Long term: Straight ahead or wrong turn?

In the rush of oil development and subsequent government reaction, many also believe that oil-impacted communities and the state have their heads too low to the ground, too obsessed with today's needs to worry about long-term economic development and diversification.

Gardner, from Bootstrap Solutions, has done research showing the crowding out that can happen from oil activity, and it's a story that resonates in the Bakken. Exploration, drilling and production bring many jobs. Labor shortages ensue, driving up wages. As workers migrate to well-paying jobs, housing becomes scarce, and the overall price of living goes up.

Meanwhile, base industries like agriculture and manufacturing are weakened as land and labor become more expensive and more pressure is put on water and road infrastructure. High costs and lack of affordable housing also stifle the development of secondary, non-oil-related professional and service industries that would normally emerge to serve a growing population with considerable discretionary income.

"In the short term, that has the effect of crowding out the lower-wage end" of the economy, not only retail but other service jobs not normally considered lower wage, like teachers and police officers, said Gardner. "The perverse result is an energy county can end up less diverse at the end than a non-oil county," he said.

The phenomenon even has a name, "Dutch disease," coined for the economic mania that followed the discovery of major oil and gas deposits in the North Sea near the Netherlands in the 1960s.

Bangsund, from NDSU, said the challenge for the state is figuring out how to avoid "lopsiding the economy" by ensuring that agriculture remains profitable in the region and that Dickinson retains the manufacturing base it had before the boom while facing strong wage pressures from higher-paying oil jobs. "The state is still far too reactive. … It's easy for the state to take its eye off that goal. … We're so enamored with current activity that we're not having that [long-term] discussion."

Sen. Schneider agreed that the state would benefit from some long-term planning and fretted that the state is

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Oil tax spending:
"Pots for this and pots for that"

Over the past several state budgets, North Dakota lawmakers have created a quirky, idiosyncratic system for allocating the gusher of oil and gas tax revenue coming into state coffers. As this revenue has grown, so have the number of recipients, the amount of money received and the overall complexity of the allocation system.

Among numerous sources, nary a person said they fully understood the state's allocation system for oil and gas taxes.

"It's very complicated. I don't think the average North Dakotan could tell you what they have in all those funds. I couldn't tell you, and I follow this stuff," said Barry Wilfahrt, president and CEO of the Grand Forks/East Grand Forks Chamber of Commerce.

Senate Minority Leader Mac Schneider (D-Grand Forks) acknowledged, "You almost need an astrophysics degree from MIT" to understand the many different recipients of money and how amounts are determined.

Those living in oil country are of the same opinion. Shawn Kessel, Dickinson city administrator, said the distribution mechanism "fills buckets after buckets after buckets. It's hard for me to keep track."

"There are pots for this and pots for that," said Deb Nelson, head of Vision West ND, a Dickinson-based consortium

Source: North Dakota Legislative Council

of oil-impacted local governments and other organizations. "To the layperson, it's a monstrosity."

In previous years, that might not have mattered so much. A decade ago, severance taxes on oil and gas production contributed about $120 million to the state budget. But in the just-completed 2011-13 biennium, they tallied $3.8 billion, which doesn't include $560 million earned (as of March) in royalty fees and lease-bonus payments for oil activity on state-owned land.

The state spreads that largesse among a dozen general recipients (see graphic). That's the simple part. The complex part has to do with the statutes and formulas that generate the amounts that go in each pot. For example, the state charges a separate 5 percent production tax and 6.5 percent extraction tax, and revenue from each tax fund's different buckets, but there's also some crossover.

The pots also have different fiscal goals. Some are intended to fund the regular business of government. Of the $3.8 billion in 2011-13, $300 million went to the state's general fund and $410 million was sent directly to counties, cities and tribes to help them deal with infrastructure and other impacts of oil and gas activity.

Then there are special-use buckets for the majority of the oil and gas revenue. Funds in some buckets are designed to be spent immediately—for property tax relief and grant money for oil-impacted communities, for example. The Strategic Investment and Improvement Fund is considered a rainy-day fund, but has few restrictions and has been tapped for a growing amount of one-time expenditures deemed necessary by lawmakers. "It's all fungible. It's really a soft barrier between the general fund and some of these [special] funds," according to Schneider. Other rainy-day buckets, like the Budget Stabilization Fund, come with some spending restrictions.

Finally, there are permanent trust funds, which have firmer lids on expenditures. The Common School Trust has $2.4 billion in assets, and distributions are channeled solely to K-12 school districts based on the trust's average assets. Over the coming two years, the fund will give $130 million to local school districts, double the amount in 2007-08.

The most significant new recipient of energy tax revenue is the Legacy Fund. Created two years ago, it already has $1.2 billion in assets, with roughly $80 million being added every month—assets that are off limits for spending until at least 2017. (Oil and gas trust funds will be the focus of additional *fedgazette* research for its October issue.)

A handful of buckets are amassing considerable balances, estimated at a total $6.1 billion at or near the end of fiscal year 2013 (see chart). While some of this balance will fund a record $2.2 billion in one-time expenditures in the 2013-15 biennium, most of the pots will continue to see revenue infusions from growing oil and gas tax receipts. The Legacy Fund alone is projected to reach $3 billion by the end of fiscal year 2015.

—Ronald A. Wirtz

North Dakota special-use and savings accounts

Estimated FY2013 ending balance of special-use funds receiving oil & gas revenue* (millions of dollars)

* Including production and extraction taxes, royalties and lease bonus payments

Source: North Dakota Legislative Council; Common School Trust Fund figure from state Department of Trust Lands official

Fiscal oil boom from page 6

not doing enough to "plan for life after oil. There was none of that" during the most recent session. He pointed to recent nonpartisan reports about the state's future (North Dakota 2.0 and North Dakota 2020 & Beyond) that offer numerous recommendations about what the state can and should be doing. "We suffer from a lack of action, not from lack of a plan," Schneider said.

That's not to say the state has done nothing. It has a series of permanent and special-use funds that, at the very least, set aside a growing pot of money for future needs, however defined by future legislative sessions (see sidebar on page 6). One of the most far-reaching is the Legacy Fund, a permanent fund set up two years ago that has about $1.2 billion and was adding $80 million a month. This money cannot be spent until at least 2017, and any efforts to spend its assets must be approved by a two-thirds majority in both houses. (A separate *fedgazette* article is forthcoming on permanent oil trusts in other U.S. states, Alberta and Norway.)

Ultimately, assessing local and state progress in catching up with oil development is a big challenge because the state is undergoing an economic transition like none it has ever seen, one that is dynamic and hard to analyze. Almost unbelievably, the state is still on the leading edge of this boom. Oil production is projected to grow for the next 10 to 12 years—possibly doubling, maybe more—before settling into a slow, sustained downward slope. At least for a while, that means more of everything, good and bad.

Sources across the state repeatedly said clear progress has been made at the local level and (some admit grudgingly) at the Legislature. Many sources pointed to the state's conservative nature, which often prevents sweeping moves in favor of more incremental ones. In due time, they said, more progress will be made. Whether it's occurring at the speed and in the direction necessary to tap the full potential will be gauged in years and in the remainder of the oil and gas still to be pulled from the ground.

Wayne Biberdorf is the state's energy impact coordinator, appointed by Gov. Jack Dalrymple in March of last year to improve coordination between western North Dakota communities and state agencies. "I keep the governor's office updated with respect to the needs of local political entities," he said.

In Biberdorf's opinion, "Everybody's picked up their game. There's no doubt in my mind." Places like Williston and Watford City have witnessed unprecedented economic activity, "and the scale at which they are ramping up [to meet that demand] is amazing." f

Fine-tuning the oil tax machine

Taxes on oil and gas vary widely among states, with North Dakota mostly in the middle of the pipeline

By RONALD A. WIRTZ
Editor

Taxes can be simple mechanisms. Their application in the hands of lawmakers is often anything but.

Oil and gas tax revenue is a function of both energy production and tax structure. While states can't control the former, they have total control over the latter.

No two states take the same approach to taxing oil and gas production. They vary on what, how and how much to tax—even when to tax. And once that's all done, they differ on how much to give back in exemptions, credits and incentives designed to encourage exploration and production. As a result, tax revenue among energy-producing states varies widely.

Have oil, will tax

The first requirement for taxing oil and gas is, of course, oil and gas. Only 31 states produced oil last year, and 33 states marketed natural gas. Many East Coast and Midwestern states (like Minnesota and Wisconsin) have little or no oil or gas production.

Oil production is flat or declining in most states; it's growing significantly only in North Dakota and Texas (see Chart 1), but is rising modestly in a few states like New Mexico and Oklahoma. Still, given today's prices, even falling production can represent significant tax revenue.

Some states have seen natural gas production explode in recent years—like Pennsylvania, whose daily production rose almost 10-fold from 2010 to 2012, to more than 6 billion cubic feet per day, second only to Texas. While gas revenues are not trivial, in most states they do not match those of oil because taxes are usually based on the value of production, and natural gas prices have been low since 2009.

Once there is production, the most obvious component of state tax policy is so-called severance taxes that are levied at the wellhead on the gross production or market value of energy extracted (or severed) from the ground. These rates tend to vary considerably among states.

Headwaters Economics, a consulting firm in Bozeman, Mont., has studied the matter, "and we expected to find that states were quite similar … and that they equalized to their peers," said Mark Haggerty, an economist with Headwaters. Instead, rates turned out to be quite different.

North Dakota's severance tax rate is 11.5 percent (see description sidebar on page 3). That's both high and low, depending on the comparison (see table). California levies no severance tax (technically, it levies a 10th of 1 percent tax to pay for related government agency work). Texas, the nation's largest oil producer by a wide margin, levies a 4.6 percent severance tax.

On the other end of the scale is Alaska, which this spring passed a new 35 percent severance tax rate, with a $5 per barrel tax credit. This new rate replaces a progressive tax formula that started at 25 percent but increased progressively with oil prices, nearing 50 percent when oil prices hit $100 per barrel.

Haggerty noted that states with higher tax rates have often had high rates from the start, which he said was "lucky" because states struggle to increase tax rates after the fact. Pennsylvania, for example, has unsuccessfully attempted to create a severance tax to capture revenue from surging natural gas production there. In California, a top oil-producing state for decades, opponents have defeated several recent efforts to implement a severance tax.

Oil severance tax rates

California	0%
New Mexico	3.75%
Texas	4.6%
Colorado	5%
Wyoming	6%
Oklahoma	7%
Kansas	8%*
Montana	9% to 14.8%**
North Dakota	11.5%
Louisiana	12.5%
Alaska	35%***

* Kansas' rate does not reflect 3.67 percent property tax credit.

** Montana's rate depends on working/nonworking well interest.

*** Alaska's rate does not factor for $5/barrel tax credit, as well as revenue exclusions that can reduce the base rate to as low as 14 percent.

Source: State energy and other agencies

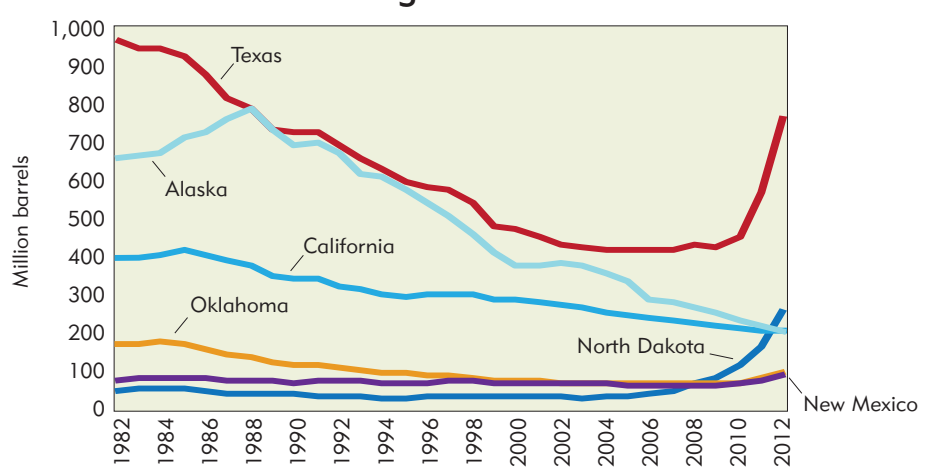
Royalties fit for a king

States collect oil and gas revenue from a variety of other sources, including energy production on state-owned lands. States sell the rights to extract oil and gas on publicly owned land to private producers, receiving one-time lease-bonus payments. Once production starts, states receive royalty payments (usually to special land trusts) for every barrel of oil produced and at rates comparable to those received by private landowners.

In North Dakota, royalty rates range from 12.5 percent in marginal-producing counties up to 18.75 percent in the seven largest oil-producing counties; the

Chart 1

Annual oil production among leading U.S. states



Source: Energy Information Administration