

As Prepared by The Ohio Oil and  
Gas Association and Energy In Depth

A 2017 Report

# OHIO'S OIL & GAS INDUSTRY ROAD IMPROVEMENT PAYMENTS

THE UTICA SHALE LOCAL SUPPORT SERIES



**ROADS & BRIDGES**

Senior  
Centers  
Law Enforcement  
Local School Funding  
Cities  
taxes  
townships  
villages  
energy  
economic  
development  
INFRASTRUCTURE  
consumer  
savings  
AFFORDABLE

## Overview

This report is the second in the Utica Shale Local Support Series that examines how oil and natural gas production has been a key driver to Ohio's economy, particularly since 2011.

Ohio has been on the cutting edge of finding the right balance between development of our natural resources while addressing public health and safety concerns. The state has learned lessons from other oil and gas producing states and put forth "best practices" to ensure that shale development can be a win for the economy and the environment.

For decades Ohio producers have prided themselves on finding the balance between development of our natural resources while addressing authentic public health and safety concerns. This balance ensures that exploration and production provides great economic gains but not at the expense of the environment we all share in Ohio.

The first report, Ohio's Oil and Gas Industry Property Tax Payment<sup>1</sup>, found the oil and gas industry contributing over \$43 million in real estate property taxes, or ad valorem taxes, to six Ohio counties in a five-year span from 2010 to 2015. The report also forecasted that Ohio counties would see an additional \$200-\$250 million over the next ten years in those same counties.

In this second report, we examine multiple ways in which oil and natural gas production benefits Ohio infrastructure, particularly roads and bridges, where there is widespread use of the Road Use Maintenance Agreement (RUMA) at the county and local level. In total, the upstream oil and natural gas industry has directly contributed over \$300 million from 2011-2017 in maintaining and improving roads and bridges in eight Ohio counties, **at no cost to the taxpayer**.

"Besides being an economic boom for eastern Ohio, the recent oil and gas activity has fostered millions of dollars of road improvements that have been much needed but unaffordable to cost strapped local government."

Columbiana County Engineer, Bert Dawson

### Key Findings for Ohio Shale Counties:

<b>Total Investment Made in Ohio Infrastructure</b>	<b>over \$300 Million</b>
<b>Total Number of Road Miles Improved</b>	<b>over 630 Miles</b>
<b>Amount of Investment Directly to Local Communities</b>	<b>100 Percent</b>

<sup>1</sup> Ohio's Oil and Gas Industry Property Tax Payment, February 2017: <https://energyindepth.org/ohio/report-ohio-counties-have-received-over-43-million-in-real-estate-property-taxes-from-utica-shale-production/>

Ohio's Oil & Gas Industry Road Improvement Payments report is designed to serve as a resource for the public to help better understand the significance that Ohio's Oil and Gas Industry have had over the past six years on improving vital infrastructure, the history of the RUMA development process, and exemplify how the Utica Shale has been a tremendous asset to local communities in Eastern Ohio.

The Ohio University Voinovich School of Leadership and Public Affairs, released a study this year entitled, *Governing Public Infrastructure in Ohio's Shale Play: Impacts and Management* which [found](#)<sup>2</sup>,

“almost all interviewees stated that county roads under the purview of a Road-Use Maintenance Agreement (RUMA) were left in **better condition than they were before the introduction of the industry**. Increases in tax revenue from the industry led to infrastructure expansion like water and sewer upgrades, railroad revitalization, and new police vehicles. And, a majority of interviewees stated that the industry was good to work with; private industry often paid up-front costs for infrastructure improvements that benefited both their own industry operations and the local community.”

In addition to property taxes paid on production discussed in the [first report](#)<sup>1</sup> of this series, Ohio's oil and gas industry supports local communities and the state of Ohio both directly and indirectly through: sales taxes, commercial activity tax, severance tax, income tax, fuel use tax, and Road Use Maintenance (RUMA) agreements.

This report takes a closer look at RUMAs for eight Ohio counties: Belmont, Carroll, Columbiana, Guernsey, Jefferson, Harrison, Monroe and Noble from 2011-2017. Columbiana and Jefferson counties were not initially included in the first Utica Shale Local Support Series; however, due to recent drilling activities in those counties combined with early oil and natural gas activities, they have now been included in this report and will be in any subsequent reports. These eight counties in Ohio are identified as core “Utica Shale” counties, based on oil and natural gas production, pipeline and midstream investment, and related industry activity.

Our research for this report is based off of information derived from Freedom of Information Act (FOIA) requests from county engineers, data directly provided by Ohio's oil and natural gas shale well operators, and assistance from the Ohio Department of Transportation (ODOT). Our research focuses primarily around road improvements related to well pad construction and other upstream activities.

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<sup>2</sup> Governing Public Infrastructure in Ohio's Shale Play: Impacts and Management, April 2017: <https://www.ohio.edu/ce3/resources/upload/CE3-White-Paper-Ohio-Shale-Public-Infrastructure-April-2017-FINAL.pdf>





## History of the Road Use Maintenance Agreement (RUMA)

Oil and natural gas development in Ohio has been ongoing since 1814, although modern shale development didn't start until 2011. As leasing of minerals for modern shale development began, Ohio regulators [looked at](#)<sup>3</sup> "best practices" from other states to determine how to best regulate Ohio's blossoming unconventional oil and gas industry. With regard to the need for RUMAs, modern shale development is starkly different than conventional or traditional oil and gas exploration. Therefore, in preparation for the potential of Utica and Marcellus shale development, precautions needed to be made to address public health, safety, and infrastructure-related concerns.

Commercial oil and natural gas development in Ohio has been ongoing since 1860, although horizontal shale development didn't start until 2011. As leasing of minerals for horizontal shale development began, Ohio's regulations were updated for these operations to reflect the larger scale operations as compared to conventional oil and gas exploration that has been prevalent in Ohio for years. Therefore, additional regulations were promulgated to address public health, safety, and infrastructure-related concerns relegated to shale development.

In 2011 several local governments signed RUMAs with oil and gas operators. The first RUMA was signed on August 23, 2011 between an oil and gas operator and Columbiana

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<sup>3</sup> Eastern Ohio Shale Play ODOT's Response, July 2014: [https://www.dot.state.oh.us/Divisions/Planning/Conference/Documents/Presentations/Luncheon/MacAdam\\_Luncheon.pdf](https://www.dot.state.oh.us/Divisions/Planning/Conference/Documents/Presentations/Luncheon/MacAdam_Luncheon.pdf)

County, but it wasn't until June 11, 2012 when [Ohio Senate Bill 315](#)<sup>4</sup> (SB 315) was signed into law, that a good faith effort to negotiate a RUMA was required in order to obtain a drilling permit. The law put forth a host of new regulations and permitting requirements on horizontal drilling and hydraulic fracturing, which quickly garnered [headlines](#)<sup>5</sup> such as "Ohio Looks to 'Do It Right' as Shale Boom Revives Steel". SB 315 clearly [states](#)<sup>4</sup>:

"Road Use Maintenance Agreements: A new application for a horizontal well will require the applicant to provide either: (i) a copy of a road use maintenance agreement "containing reasonable terms" with the relevant public official(s); or (ii) an affidavit indicating that the applicant was unable to enter such an agreement despite good-faith efforts. R.C. 1509.06(A)(11)(b).

Unlike other states, Ohio is a "Home Rule"<sup>6</sup> state and as a result there is not one agency that has jurisdiction over all the roads, such as the Ohio Department of Transportation (ODOT). In Ohio a company may need to enter into multiple RUMAs with multiple local governments to address jurisdictional concerns of road use required prior to an application to drill a single horizontal well. In 2012, Ohio Attorney General Mike DeWine issued<sup>7</sup> a 20 page guidance on RUMAs via Attorney General Opinion No. 2012-029. The guidance was in response to questions from local communities about the execution of RUMAs signed specifically with oil and natural gas operators.

Since 2011, there have been hundreds of RUMAs signed between private companies and Ohio counties and local municipalities. As recently as January 2017, the Ohio Department of Transportation, and Ohio's Research Initiative for Locals (ORIL) issued a report entitled, *Best Practices of Road User Maintenance Agreements Amongst Local Government Agencies in Ohio*<sup>8</sup>, which found,

"The proactive approach by ODOT, ODNR, and CEAO to address the horizontal oil and gas well drilling and hydraulic fracturing in eastern **Ohio has worked well in addressing development activity which places an unanticipated burden on the local roadway system....** A regional task force composed of state and local agencies as well as the industry was organized to promote communication and uniformity in application of the law. A model RUMA was developed which is used as is or in modified form by more than 70% of local agencies in Ohio surveyed for this research."

<sup>4</sup> Ohio Senate Bill 315 of 2012: <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA131-SB-315>

<sup>5</sup> "Ohio Looks to 'Do It Right' as Shale Boom Revives Steel." Environment & Energy Publishing, March 2012: <http://www.steel.org/Global/document-types/news/2012/ohio-looks-to-do-it-right-as-shale-boom-revives-steel.aspx?siteLocation=e0af1b7d-42dc-48d7-976a-2f9332c958f5>

<sup>6</sup> Ohio's Constitution Gives Municipalities "Home Rule" Self-Government Authority, December 2016: <https://www.ohioobar.org/ForPublic/Resources/LawYouCanUse/Pages/Ohio%27s-Constitution-Gives-Municipalities-Home-Rule-Self-Government-Authority.aspx>

<sup>7</sup> Ohio Attorney General Issues Guidance on Road Use Maintenance Agreements (RUMA's), November 2012: <https://www.oilandgaslawreport.com/2012/11/30/ohio-attorney-general-issues-guidance-on-road-use-maintenance-agreements-rumas/>

<sup>8</sup> Best Practices of Road User Maintenance Agreements Amongst Local Government Agencies in Ohio, January 2017: [http://www.dot.state.oh.us/groups/oril/Documents/Projects/Reports/135251\\_Final%20Report%20\\_%2020170119.pdf](http://www.dot.state.oh.us/groups/oril/Documents/Projects/Reports/135251_Final%20Report%20_%2020170119.pdf)

RUMAs have continued to evolve over the past several years to include shared RUMAs, otherwise known as a Shared Road Use Maintenance Agreement (SRUMA). SRUMAs occur when two or more oil and gas operators have heavy equipment on the same section of roadway and agree to share the cost of a traditional RUMA.

To address ongoing and emerging discussions around “best practices” and cooperation with local communities, a regional taskforce has been established to continue to address road-related public concerns. This taskforce consists of representatives from the oil and gas industry, county engineers, township trustees, and ODOT.

RUMAs are just another example of how the natural gas industry proactively tries to be a good neighbor in the communities where it operates and provides support (along with jobs, revenue, and taxes) to our local governments.

## Execution of a Road Use Maintenance Agreement

Before an application for a horizontal well is filed with the Ohio Department of Natural Resources (ODNR), an oil and gas operator must first put a good faith effort into entering into a contractual agreement that prior drilling and completion of a well, the oil and gas company will repair and/or maintain a section of road, bridge, culvert, etc. The scope of the work to be done is determined by the local government who has jurisdiction over the road, which is typically the county engineer’s office. The contract is signed by both parties and is generally put in place before a permit for a horizontal well is submitted to ODNR.

Ohio’s Attorney General created guidelines in 2012 that oil and gas companies must abide by when executing a RUMA, including provisions for the construction of the road, bridge, or otherwise noted scope of work defined in the RUMA.

The guidelines point out<sup>7</sup> that R.C. 1509.06(A)(11) specifically requires a company applying for an oil and gas well permit to (1) identify what roads it will use to access the well site, and (2) provide a copy of its agreement with the appropriate governmental authority “concerning maintenance and safe use of the roads . . .” or provide “an affidavit attesting that the applicant attempted in good faith to enter into such an agreement, but was unable to do so.”

The Attorney General’s guidelines also concluded that all RUMA work is subject to Ohio’s prevailing wage laws. After a well is completed, the governing body will inspect the scope of work in the RUMA before the oil and gas company is released from the agreement. Should the company decide to return and drill additional wells at a later date, the RUMA could remain in place for an extended period of time.

In other words, an oil and gas company determines where they want to drill a well; they contact the appropriate government entity, which is typically the county engineer but may also include township trustees or municipal officials. The company is then responsible for obtaining an engineering study to determine if the road can accommodate heavy equipment traffic. The engineer determines the scope of work required by the company during the project and the company must carry out that work, pay their contractor and ensure the work is done to a satisfactory level. Even after initial road work is completed, the roads may need additional repairs as the project continues. The oil and gas company pays for this entire process.

In many cases in southeastern Ohio gravel roads have been paved or existing roads have been widened and substantially improved as a result of oil and gas drilling. In addition, safety improvements have been made such as installing guard rails, repairing road slips, and new striping. **This upgraded infrastructure is a benefit to all users of the roads and comes at no costs to the taxpayer.**

Columbiana County Deputy County Engineer Bob Durbin reported<sup>9</sup>, “In the long run we’re going to end up with stronger and better roads.”

## Findings

This report was produced at the request of state agencies and local communities throughout Ohio. Because Ohio is a Home Rule state, there is no central data depository that exists statewide, or even in each county or township. Prior to this report, only “estimates” were arrived at using IMPLAN modeling or other metrics of analysis based on well pads and projections.

Through Freedom of Information Act (FOIA) requests made to eight county engineers, the researchers requested miles of roads repaired and improved for each county under a RUMA. There are significant cost differences for repairs depending on the type and location of a road, as well as estimated costs to repair or replace a bridge and/or culvert. County engineers in Belmont, Carroll, Columbiana, Jefferson, Guernsey, Harrison, Noble, and Monroe provided the research team with the numbers of miles paved and the type of road associated with that improvement, as well as the number of bridges and/or culverts repaired and replaced.

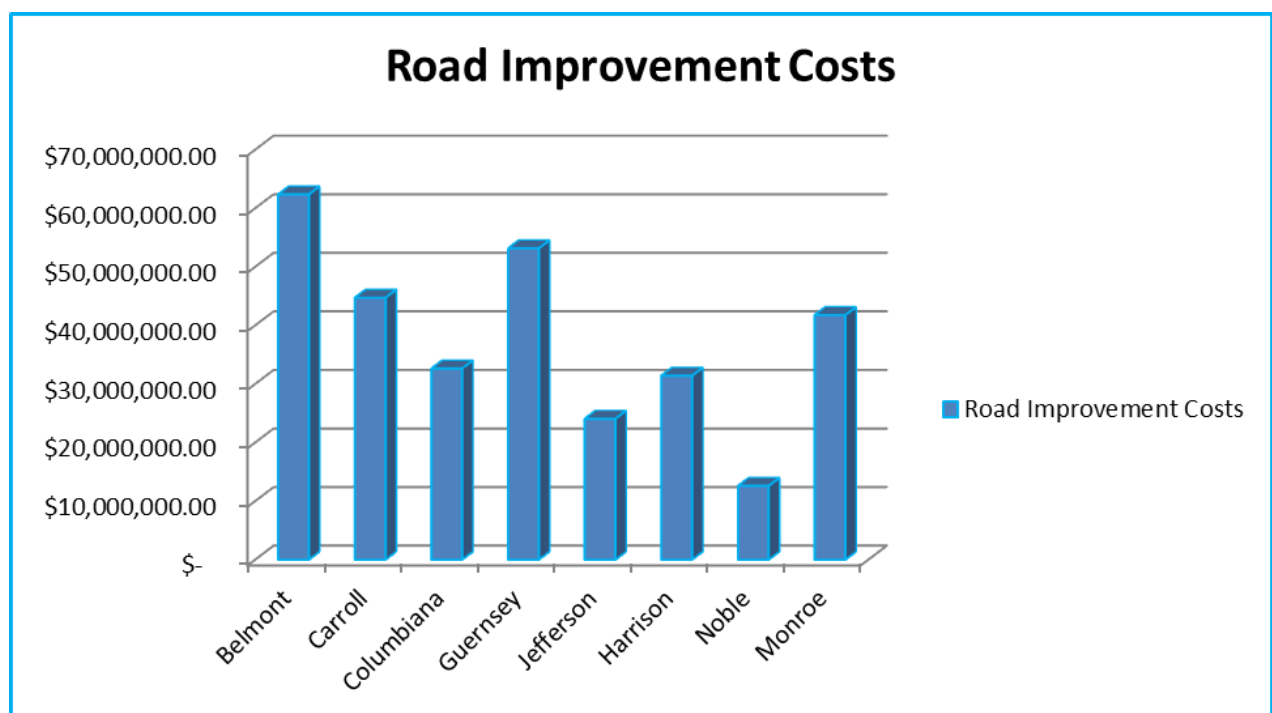
Using this data, we then cross referenced with the actual dollar amount paid by oil and gas companies who are charged with the execution of the RUMA, and hire and pay a contractor to perform the scope of work outlined in the RUMA.

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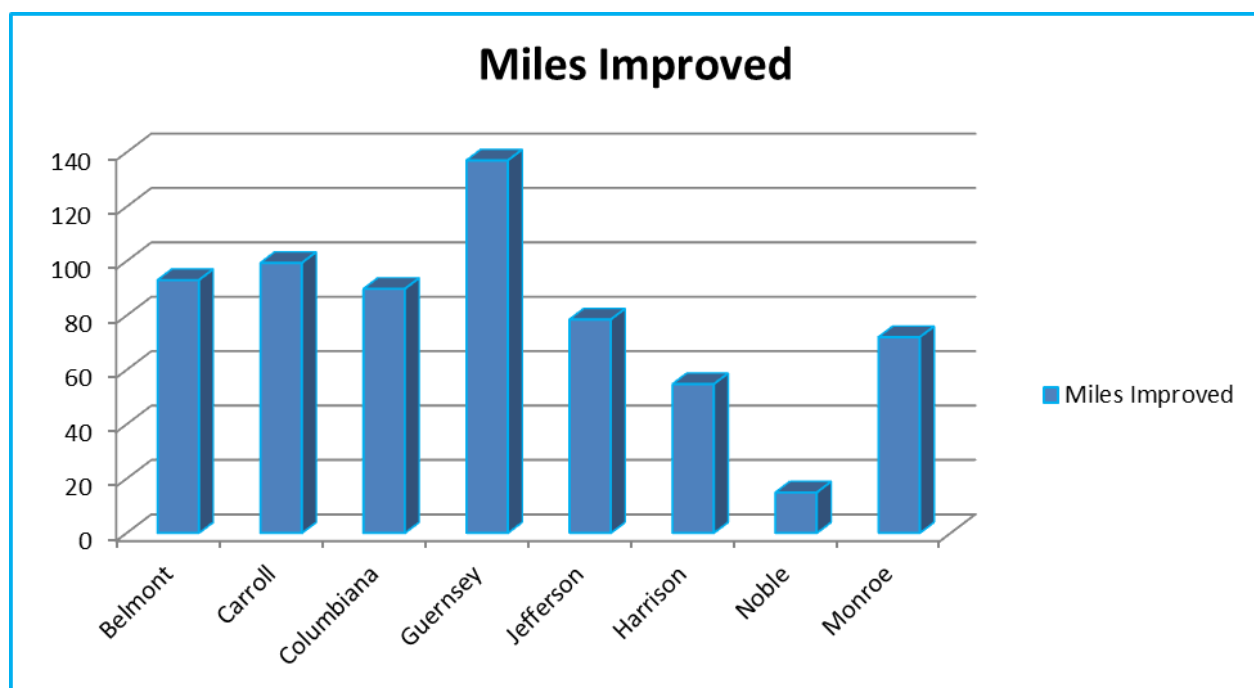
<sup>9</sup> “County Keeps Its Eyes On the Road.” Morning Journal News, February 10, 2014

Our research was arrived at working with all eight county engineers and the vast majority of major operators in those counties. A combination of these data sets have led us to arrive at these conservative figures. It should be noted that our numbers are not estimates— they are real numbers spent by the oil and natural gas industry since the first horizontal shale well was drilled in Ohio.

County	Road Improvement Costs	Miles Improved
<b>Belmont</b>	\$ 62,355,737.70	93
<b>Carroll</b>	\$ 44,715,692.48	99.33
<b>Columbiana</b>	\$ 32,634,228.51	89.77
<b>Guernsey</b>	\$ 53,146,414.20	137
<b>Jefferson</b>	\$ 24,056,901.00	78.52
<b>Harrison</b>	\$ 31,409,026.56	54.75
<b>Noble</b>	\$ 12,587,467.00	14.92
<b>Monroe</b>	\$ 41,757,761.45	72
<b>Totals</b>	\$ 302,663,228.92	639.29







Our research found that, as a general rule, there is a direct correlation with oil and natural gas drilling and dollars spent on infrastructure in the counties where oil and natural gas exploration and production is occurring. However, there is also significant cost differentials associated with RUMAs based on various factors including but not limited to the pre-existing condition of the road and preexisting access to a well pad or lack thereof. In short, there is not a “one size fits all” model that applies to RUMAs.

Before & After: Atwood Lake Bridge Avalon Rd. in Carroll County



Source: Carroll County Engineer's Report 2013

In years where there was heightened drilling, such as in Carroll County in 2013 and 2014, expenditures on road maintenance increased rapidly. For example, Carroll County saw 210 Utica Shale wells developed during peak drilling that occurred from 2013 to the first quarter of 2014<sup>10</sup>. During that one year alone, RUMAs conservatively accounted for over \$12 million. To put into perspective how significant this is, Carroll County Engineer's entire revenue reported in 2016 was \$3.9 million<sup>10</sup>.

The peak rig count in Ohio, as reported by ODNR<sup>11</sup> took place in December 2014 was 59 total rigs. However, rig counts dropped significantly thereafter.



Our findings support that as RUMA expenditures and permits dropped (in some cases) by 99 percent per county, this occurred in direct correlation with drilling activities, particularly in 2016. For example, in the first quarter of 2016, rig counts statewide stood at 10. RUMA related expenses in Carroll County for that year, as reported to the research team by oil and gas operators, was less than one percent of the highs realized in 2013. Therefore, if drilling activities slow or cease to exist, expenditures on roads, bridges, and related infrastructure associated with RUMAs will slow or cease as well.

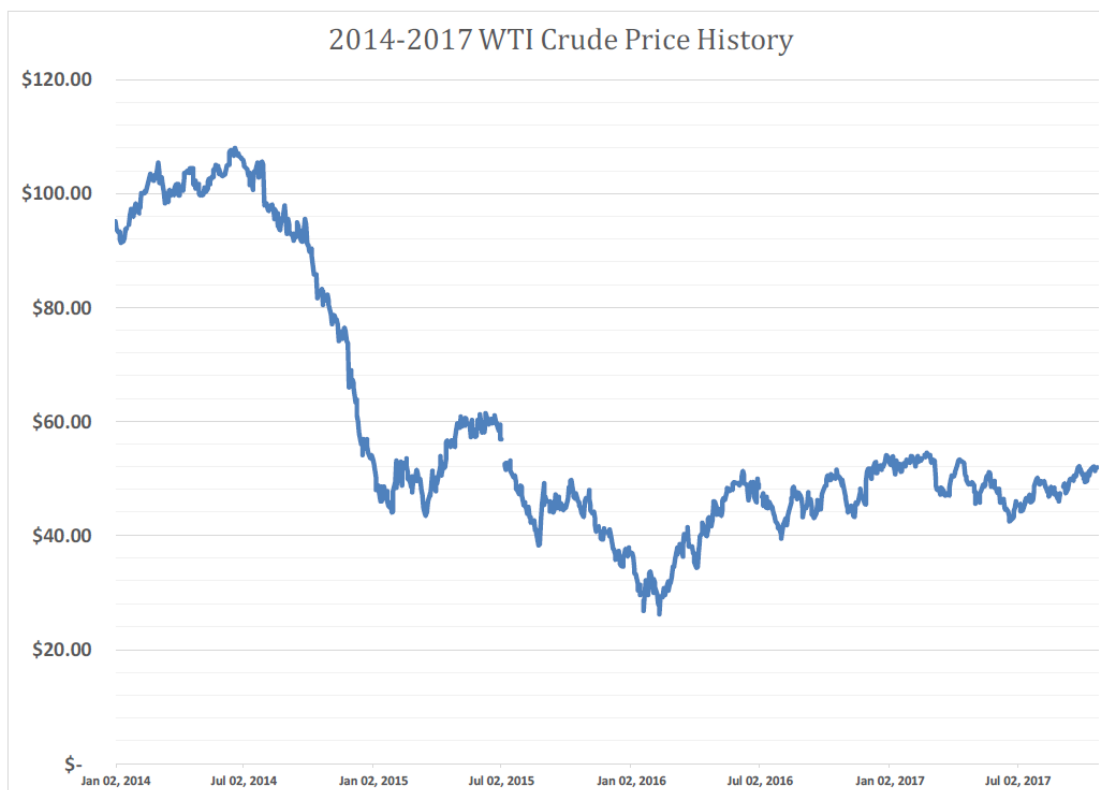
<sup>10</sup> Carroll County Engineer 2013 Year End Report

<sup>11</sup> Appendix A

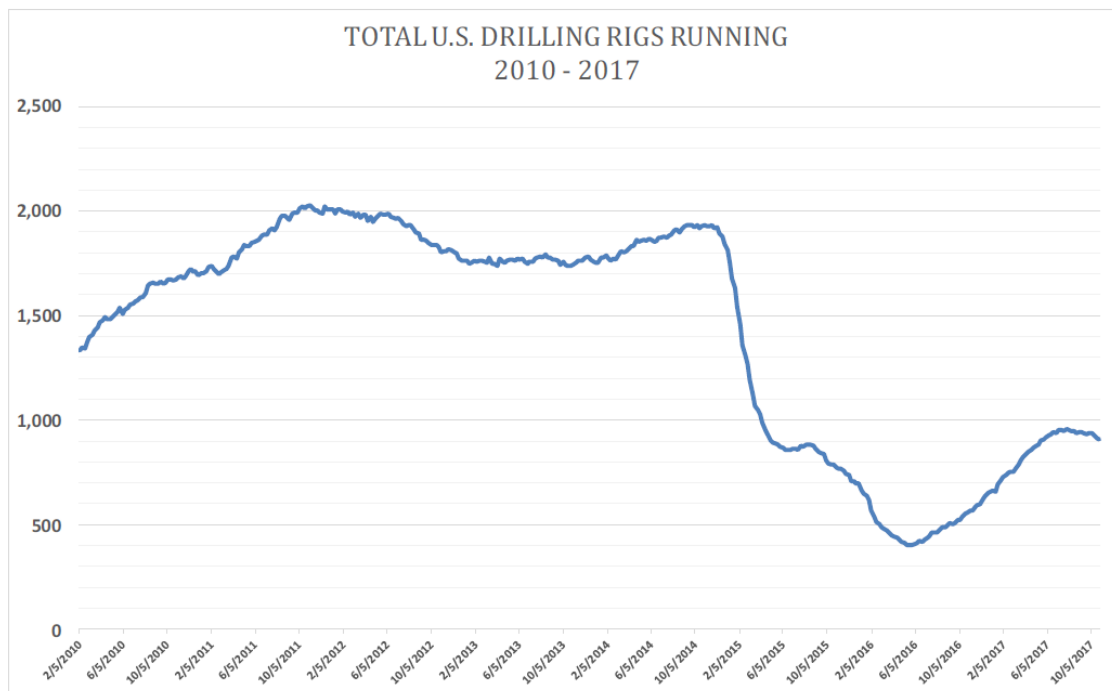
Unlike property taxes paid on production, RUMAs are tied with drilling operations directly, and more specifically the number of well pads needed for exploration and production. However it should be noted that property taxes paid on production do similarly rise and fall in direct correlation to production of oil and natural gas.

As permits are issued and rig counts improve, RUMA expenditures from oil and gas operators will also rise. For example, as previously noted the highest rig count that Ohio realized to date was 59 rigs in the fourth quarter of 2014. That number dropped to 10 in the first quarter of 2016, and as of the fourth quarter of 2017, rig counts stand at 23 statewide. To put that into perspective, rig counts have fallen to 83 percent over the past few years.

Today, while rig counts have improved dramatically over the lows, rig counts are still down 61 percent from Ohio's high of 59 total rigs. Rig counts and drilling activities in Ohio and nationwide are directly correlated to commodity prices.



Source: EIA



Source: Baker Hughes Rig Count Data

As energy infrastructure projects move forward, such as pipeline and related midstream infrastructure and end-users of natural gas and natural gas liquids (NGLs) come online, we would expect drilling and rig counts to increase overtime. With increased takeaway capacity, we expect commodity prices to improve and with it will come an increase in RUMAs, permits, and well pad construction.

## Conclusion

RUMAs are tax-free, long-term infrastructure improvements that provide the pathways for growth, increased economic development and safer transportation of people and goods in southeast Ohio. This report shows that there is a real and significant improvement to infrastructure that is directly correlated to oil and natural gas drilling. RUMAs mean better and safer roads for everyone.

Ohio has consistently been a steadfast innovator in addressing public health and safety concerns since the onset of horizontal drilling and hydraulic fracturing. The infrastructure improvements that have taken place over the past few years are a direct benefit to the people who live and work in areas where drilling is occurring.



Both reports to date in the Utica Shale Local Support Series have concluded that drilling and production of oil and natural gas lead directly to significant economic benefits such as over \$43 million in property taxes paid on production and over \$300 million paid in improvements to vital infrastructure.

## Appendix

Week Of:	Number of Horizontal Rigs	Week Of:	Number of Horizontal Rigs	Week Of:	Number of Horizontal Rigs	Week Of:	Number of Horizontal Rigs
1/7/2013	31	6/17/2013	38	12/2/2013	48	5/19/2014	46
1/14/2013	33	6/24/2013	35	12/9/2013	50	5/26/2014	45
1/21/2013	31	7/1/2013	39	12/16/2013	42	6/2/2014	46
1/28/2013	30	7/8/2013	33	12/23/2013	43	6/9/2014	43
2/4/2013	33	7/15/2013	39	12/30/2013	39	6/16/2014	49
2/11/2013	32	7/22/2013	42	1/6/2014	37	6/23/2014	45
2/18/2013	32	7/29/2013	41	1/13/2014	45	6/30/2014	43
2/25/2013	36	8/5/2013	42	1/20/2014	44	7/7/2014	44
3/4/2013	35	8/12/2013	48	1/27/2014	44	7/14/2014	48
3/11/2013	35	8/19/2013	41	2/3/2014	41	7/21/2014	43
3/18/2013	37	8/26/2013	37	2/10/2014	44	7/28/2014	51
3/25/2013	36	9/2/2013	38	2/17/2014	45	8/4/2014	49
4/1/2013	36	9/9/2013	35	2/24/2014	48	8/11/2014	49
4/8/2013	35	9/16/2013	37	3/3/2014	48	8/18/2014	49
4/15/2013	32	9/23/2013	36	3/10/2014	43	8/25/2014	48
4/22/2013	32	9/30/2013	38	3/17/2014	43	9/1/2014	47
4/29/2013	36	10/7/2013	37	3/24/2014	42	9/8/2014	46
5/6/2013	34	10/14/2013	37	3/31/2014	39	9/15/2014	41
5/13/2013	31	10/21/2013	38	4/7/2014	43	9/22/2014	45
5/20/2013	31	10/28/2013	40	4/14/2014	44	9/29/2014	46
5/27/2013	40	11/4/2013	41	4/21/2014	42	10/6/2014	47
6/3/2013	44	11/11/2013	45	4/28/2014	39	10/13/2014	45
6/10/2013	40	11/18/2013	42	5/5/2014	35	10/20/2014	46
		11/25/2013	46	5/12/2014	38	10/27/2014	46

Week Of:	Number of Horizontal Rigs	Week Of:	Number of Horizontal Rigs	Week Of:	Number of Horizontal Rigs	Week Of:	Number of Horizontal Rigs
11/3/2014	45	4/27/2015	23	10/19/2015	21	4/11/2016	11
11/10/2014	51	5/4/2015	29	10/26/2015	26	4/18/2016	11
11/17/2014	52	5/11/2015	26	11/2/2015	22	4/25/2016	11
11/24/2014	52	5/18/2015	25	11/9/2015	20	5/2/2016	12
12/1/2014	55	5/25/2015	26	11/16/2015	19	5/9/2016	11
12/8/2014	53	6/1/2015	25	11/23/2015	20	5/16/2016	12
12/15/2014	59	6/8/2015	23	11/30/2015	17	5/23/2016	11
12/22/2014	51	6/15/2015	21	12/7/2015	19	5/30/2016	10
12/29/2014	51	6/22/2015	19	12/14/2015	17	6/6/2016	11
1/8/2015	51	6/29/2015	21	12/21/2015	16	6/13/2016	12
1/12/2015	50	7/6/2015	18	12/28/2015	16	6/20/2016	11
1/19/2015	44	7/13/2015	23	1/4/2016	16	6/27/2016	10
1/26/2015	47	7/20/2015	20	1/11/2016	16	7/2/2016	11
2/2/2015	40	7/27/2015	21	1/18/2016	16	7/9/2016	13
2/9/2015	39	8/3/2015	20	1/25/2016	16	16-Jul	12
2/16/2015	39	8/10/2015	24	2/1/2016	17	7/23/2016	16
2/23/2015	38	8/17/2015	28	2/8/2016	16	7/30/2016	15
3/2/2015	38	8/24/2015	22	2/15/2016	14	8/6/2016	16
3/9/2015	34	8/31/2015	22	2/22/2016	14	8/13/2016	14
3/16/2015	28	9/7/2015	22	2/29/2016	15	8/20/2016	14
3/23/2015	29	9/14/2015	22	3/7/2016	15	8/27/2016	17
3/30/2015	31	9/21/2015	23	3/14/2016	13	9/3/2016	17
4/6/2015	27	9/28/2015	22	3/21/2016	12	9/10/2016	16
4/13/2015	25	10/5/2015	21	3/28/2016	12	9/17/2016	14
4/20/2015	25	10/12/2015	24	4/4/2016	12	9/24/2016	18

Week Of:	Number of Horizontal Rigs	Week Of:	Number of Horizontal Rigs	Week Of:	Number of Horizontal Rigs
0/1/2016	22	4/1/2017	20	10/14/2017	23
0/8/2016	19	4/8/2017	20	10/21/2017	23
0/15/2016	17	4/15/2017	19		
0/22/2016	16	4/22/2017	22		
0/29/2016	15	4/29/2017	21		
1/5/2016	16	5/6/2017	22		
1/12/2016	19	5/13/2017	23		
1/19/2016	21	5/20/2017	24		
1/26/2016	19	5/27/2017	22		
2/3/2016	19	6/3/2017	21		
2/10/2016	23	6/10/2017	25		
2/17/2016	22	6/17/2017	24		
2/24/2016	22	6/24/2017	24		
/7/2017	23	7/1/2017	23		
/14/2017	24	7/8/2017	25		
/21/2017	23	7/15/2017	23		
/28/2017	22	7/29/2017	27		
/4/2017	21	8/5/2017	21		
/11/2017	20	8/12/2017	26		
/18/2017	20	8/19/2017	28		
/25/2017	22	8/26/2017	27		
/4/2017	20	9/2/2017	27		
/11/2017	20	9/9/2017	24		
/18/2017	21	9/23/2017	26		
/25/2017	20	10/7/2017	22		



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Monroe County Engineer's Office

Noble County Engineer's Office

Ohio Department of Natural Resources (ODNR)

## Contacts

Jackie Stewart  
State Director  
Energy In Depth Ohio

[Jackie@energyindepth.org](mailto:Jackie@energyindepth.org)  
[www.energyindepth.org](http://www.energyindepth.org)

Mike Chadsey  
Director of Public Relations  
Ohio Oil and Gas Association

[mike@ooga.org](mailto:mike@ooga.org)  
[www.ooga.org](http://www.ooga.org)