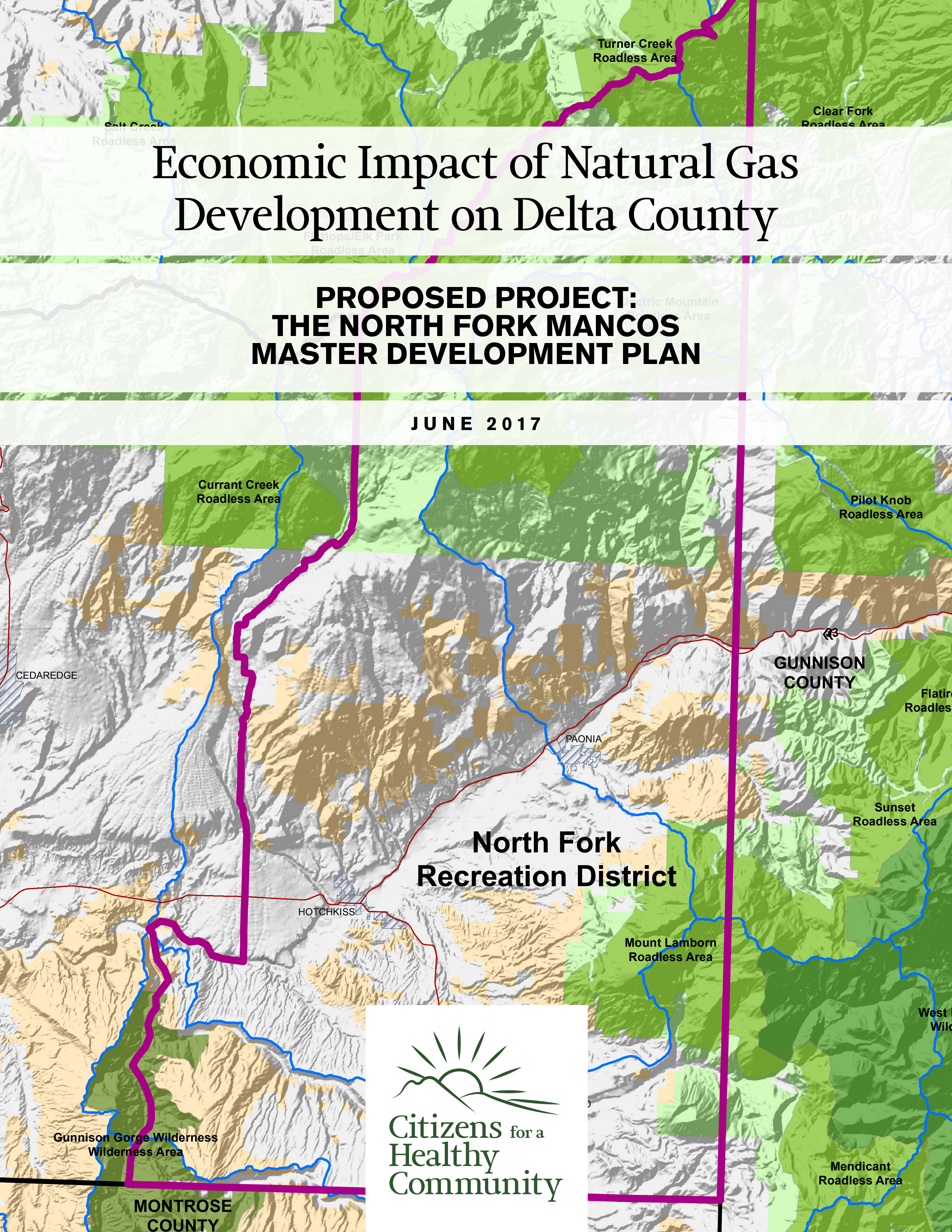
Economic Impact of Natural Gas Development on Delta County

PROPOSED PROJECT: THE NORTH FORK MANCOS MASTER DEVELOPMENT PLAN

JUNE 2017



Citizens for a Healthy Community

Economic Impact of Natural Gas Development on Delta County

PROPOSED PROJECT: THE NORTH FORK MANCOS MASTER DEVELOPMENT PLAN

JUNE 2017

Author: Andrew Forkes-Gudmundson

Citizens for a Healthy Community (CHC) is a grassroots nonprofit 501(c)3 organization dedicated to protecting the air, water and foodsheds within the Delta County region of Southwest Colorado from the impacts of oil and gas development. CHC is the county's watchdog for oil and gas development, conducts research and advocacy, and works with partner organizations to fight for the health and safety of citizens and implementation of safeguards to protect public health and the environment.

Citizens for a Healthy Community
Office: The Harvester Building, 211 Grand. Ave, Paonia, CO 81428
Mailing address: PO Box 1283, Paonia, CO 81428
Phone: (970) 399-9700
www.chc4you.org

Table of Contents

I. Introduction

The majority of oil and gas leases and proposed oil and gas development in Delta County are in the North Fork Valley and its headwaters and watersheds. The Delta County Board of County Commissioners is in favor of oil and gas development, citing job creation and tax revenues as economic benefits. However, North Fork Valley residents, who would be directly impacted by such industrial activities, are resoundingly opposed to oil and gas development and believe that such activities, would not only result in degradation of public health and the environment, but are also incompatible with the local economy.

While the County would like to make up for lost coal jobs and revenue, North Fork Valley residents want to protect a growing local economy that has been transitioning away from extractive industries towards sustainable agriculture, tourism, recreation, art and music, and renewable energy. The North Fork Valley has worked hard to develop its brand over the last twenty years as evidenced by its Colorado Creative District designation, award-winning wines, fruits and vegetables, and regional, state, and national recognition as a recreation and agritourism destination. The North Fork Valley is a magnet for the eco-concious, young families and retirees who value quality of life, and continuously attracts talent and skills from around the world.

Paonia has been especially successful in this effort, as the only town in Delta County that has shown growth.[1] In addition, the North Fork Valley real estate market has outperformed the overall County since 2011 in terms of average residential home sale price.[2] The North Fork Valley is a unique and beautiful place. It is the location of the highest concentration of organic farms in Colorado, and is home to numerous outdoor recreation opportunities. In addition, the Upper North Fork is the headwaters region for critical watersheds to downstream farms and homes.

To address these competing visions for the future of the North Fork Valley and Delta County, Citizens for a Healthy Community (CHC) researched the estimated costs and revenues to Delta County of a proposed natural gas project. To CHC's knowledge, Delta County has not undertaken a cost-benefit analysis of proposed oil and gas development, nor has it compared or projected the effects of oil and gas development on the leading sources of County revenue likely to be impacted by such development—residential property taxes, and sales taxes from outdoor recreation and agritourism. CHC is filling this critical gap in information and decision-making to educate the public and the County on the economic impact of proposed oil and gas development.

This research focuses on the proposed North Fork Mancos Master Development Plan (NFMMDP), estimated property and severance tax revenues, the costs to the County estimated from the total NFMMDP project, current residential property tax revenues to the County, and the direct and indirect economic benefits the County receives from an outdoor recreation and agritourism economy that relies on surrounding public lands. The NFMMDP proposes drilling 35 wells, three of which would be located in Delta County.

Our research revealed that the NFMMDP would result in a net economic loss to the County when all foreseeable costs (for example road repair, lost residential property tax revenue, and lost sales tax from outdoor recreation and agritourism income) are subtracted from estimated property and severance tax revenues.

1. *Delta County Demographic and Economic Profile*, Colorado Department of Local Affairs 2014, p. 1
2. Average Sale Price for Residential Properties Delta County Sales (as reported to the MLS) Delta County vs. North Fork Area 2005-2016, prepared by Bob Lario and the Remax Office in Paonia, based on data provided by the Delta County Board of Realtors, 2016. (hereinafter Average Sale Price for Residential Properties)

II. NFMMDP Revenue

Gunnison Energy, LLC (GELLC) has proposed a project called the North Fork Mancos Master Development Plan, which would place 35 new gas wells 12 miles north of Paonia, at the intersection of three critical watersheds. The project requires four new wellpads and expansion of one existing wellpad. The existing well pad is a part of the Iron Point Federal Unit located in Delta County. Three new wells will be drilled from this pad.

GELLC proposes to produce 700 billion cubic feet of natural gas over the 30-year lifetime of the project from the 35 proposed wells. Although GELLC envisions future development, which could increase the total number of wells within the NFMMDP project boundary to 104 wells, with estimated production of 2.1 trillion cubic feet of natural gas, our research only considered the 35-well project released to the public by the BLM for scoping comments on January 18, 2017. Additionally, we focused on the three wells out of 35 that would be drilled in Delta County.

The NFMMDP proposes a 3-year construction and completion timeline for the project. The project is still undergoing scoping comments, and will then have to undergo either an Environmental Assessment, or preferably, and Environmental Impact Statement. Depending which one the BLM requires, if the project is approved it could begin as early as Fall 2017 or the beginning of 2018.[3]

LOCAL GOVERNMENT OIL AND GAS REVENUE

Local governments in Colorado derive income from oil and gas wells in two ways—property taxes and severance taxes. Both are based on production volume. County governments assess property taxes, and the state assesses severance taxes. Once the state has assessed the severance tax, it redistributes portions of it back to local governments. Roughly half of the severance collected on production in a county is returned to that county.[4]

Local governments in Colorado derive income from oil and gas wells in two ways—property taxes and severance taxes.

Oil and gas property taxes in Colorado are based on the production value of property. The taxable assessed value of an oil and gas property is based on actual market value adjusted by an assessment ratio, which is 87.5% for oil and natural gas.[5] Headwaters Economics created the following formula for estimating property tax: ((Prior year assessed value * .95) * .87) * (.058636).[6]

3. *Proposed Action NFMMDP for Oil and Gas Exploration and Development Gunnison and Delta Counties, Colorado*, prepared by Gunnison Energy, LLC, January 2017, p. 1. (*Hereinafter* NFMMDP)
4. *Oil and Gas Industry Economic and Fiscal Contributions in Colorado by County, 2014*, Business Research Division, Leeds School of Business, December 2015 p. 16-17 (*Hereinafter* Economic and Fiscal Contributions)
5. *Economic and Fiscal Contributions,* p. 13-14
6. *How Colorado Returns Unconventional Oil Revenue to Local Governments*, Headwaters Economics, January 2014, p. 5 (*Hereinafter* Colorado Unconventional Oil Revenue)

Severance taxes in Colorado are assessed on a sliding scale from 2-5% based on gross income from production (almost all wells produce enough to be assessed the 5% rate). Severance taxes are complicated by the ad valorem tax credit, which allows producers to deduct 87.5% of their prior year's property tax burden from their severance tax bill.[7] Headwaters Economics created the following formula for estimating severance tax: (((Gross production value * .95) * .05)+ 300,000) – (prior year property tax * .875)[8]

Over the life of an average well in Colorado, once all available deductions are taken into account, there is an estimated effective property tax rate of 4.87% of total production value, and an effective severance tax rate of 1.87% of total production value.[9] With the State returning approximately 50% of collected severance tax from oil and gas operations within the county, the effective county severance tax rate is 0.935%. Using these figures, local governments are estimated to receive 5.8% (4.87 + (.5 * 1.87)) of the total production value of oil and gas produced in the county in tax revenue.

OIL AND GAS REVENUE FOR DELTA COUNTY

Most of the NFMMDP project will be on federal land, managed by the BLM and the USFS. While some of the wellpads are on private fee lands, they will be accessing largely federal minerals.[10] GELLC will pay royalties to the fee mineral owners, and to the federal government, but Delta County does not own any of the minerals. Delta County revenue from the project will come from property and severance taxes.[11]

Three wells proposed in Delta County would produce 60 billion cubic feet of gas... a total of estimated revenue of $9.2 million - $11 million generated over the 30-year life of the project, or between $307,000 - $367,000 per year.

GELLC plans to extract 700 billion cubic feet of natural gas over the 30-year lifetime of the project.[12] Not all of that gas will be produced in Delta County. Of the 35 proposed wells, only three are located in Delta County.[13] Because property taxes are only assessed on production originating in the county, Delta County will only see tax revenue from these three wells. Production will, in practice, vary from well to well, but for the purpose of this research, it is assumed that each well will produce the same amount of gas. Therefore, we have allocated roughly 60 billion cubic feet of natural gas to Delta County.

7. *Economic and Fiscal Contributions*, p.16
8. Colorado Unconventional Oil Revenue, p. 4
9. *Id.*
10. *NFMMDP* p.1
11. *Local Government Revenue from Oil and Gas Production*, Daniel Raimi & Richard G. Newell, Duke Energy Initiative, May 2016p. 10 (*Hereinafter* Local Government Revenue)
12. NFMMDP p. 1
13. *Id.* at p. 2.

According to studies published by Headwaters Economics, horizontal and hydraulically fractured wells do not produce at consistent rates from year to year. A typical fractured well will have a steep production decline over its lifespan, dropping about 50% over the first year.[14]

Production value is determined by the commodity price per million BTUs times production volume. We used the 5-year average commodity price from 2012 - 2017 of roughly $3.10 per million BTUs, and the average commodity price from April 2016 - April 2017 of roughly $2.60 per million BTUs to develop a potential production value range for the NFMMDP.

The three wells proposed in Delta County would produce 60 billion cubic feet of gas. 60 billion cubic feet of natural gas multiplied by 1020 BTUs per cubic foot, multiplied by either $3.10 or $2.60 per million BTUs equals $190,000,000 or $159,000,000 respectively in total production value for the three proposed Delta County wells. Applying the estimated effective tax rate of 5.8%, that comes to a total of estimated revenue of $9.2 million - $11 million generated over the 30-year life of the project, or between $307,000 - $367,000 per year.

However, due to the way Colorado assesses taxes and applies tax credits, the taxes the county actually collects will vary dramatically from year to year, and the county will not actually receive any of the tax revenue until at the very least one year after production begins, and will not see any property tax revenue until two full years after production.[15] This is important, because the County may incur costs associated with the development, such as road damage, emergency response, and lost revenue from residential property taxes, long before any revenue is returned to the county. See Table 1 for an example of application of the severance tax to a typical unconventional oil well.

TABLE 1.
COLORADO TAX POLICY APPLIED TO A TYPICAL UNCONVENTIONAL OIL WELL

PRODUCTION YEAR	GROSS PRODUCTION VALUE	COLORADO SEVERANCE TAX	COLORADO PROPERTY TAX	TOTAL TAX REVENUE
1	$5,530,321	$0	$0	$0
2	$2,984,622	$273,440	$0	$273,440
3	$2,146,014	$0	$269,554	$269,554
4	$1,686,964	$0	$145,474	$145,474
5	$1,412,756	$3,574	$104,599	$108,173
6	$1,250,365	$9,441	$82,225	$91,666
7	$1,160,428	$13,016	$68,859	$81,875
8	$1,136,597	$14,445	$60,944	$75,389
9	$1,121,166	$18,089	$56,561	$74,650
10	$897,516	$18,334	$55,399	$73,733
11		$7,810	$54,547	$62,357
12			$43,746	$43,746
TOTAL:	**$19,326,749**	**$350,339**	**$843,615**	**$1,193,954**

Source: How Colorado Returns Unconventional Oil Revenue to Local Governments, Headwaters Economics, January 2014, p. 6

14. *Unconventional Oil and Natural Gas Production Tax Rates: How Does Oklahoma Compare to Peers?*, Headwaters Economics, August 2013
15. *Colorado Unconventional Oil Revenue*, p. 6

III. Impact on Other Sources of Revenue for Delta County

The majority of Delta County's General Fund revenues come from property taxes and sales tax. Any benefit from oil and gas development must be viewed in the context of other existing revenue sources and what attracts visitors and new property owners to the North Fork Valley. We looked at sales tax generated from outdoor recreation and agritourism, and residential property taxes.

OUTDOOR RECREATION

According to the Outdoor Industry Association, the outdoor recreation industry generates $634 billion dollars in direct economic impacts across the United States.[16] In Colorado, it generates $13.2 billion in consumer spending, is responsible for 125,000 direct jobs, and generates $994 million in state and local taxes.[17] This data was gathered across a vast swath of outdoor recreation activities. The Outdoor Industry Association anticipates releasing an updated recreation economy report in 2017.

As a part of the Statewide Comprehensive Outdoor Recreation Plan (SCORP), the Outdoor Industry Association (OIA) and Colorado Parks and Wildlife (CPW) have engaged in some county-level analysis of certain sectors of the outdoor recreation economy's impact. Across the Southwest Region of Colorado (which includes Delta County), outdoor recreation directly generates $1.7 billion in economic output, $520 million in wages, $144 million in state and local taxes, and 18,420 jobs, and when direct and secondary impacts are considered, it generates $2.173 billion in output, $714 million in wages, $182 million in state and local taxes, and 24,568 jobs.[18]

The SCORP report looked more closely at the impact from Fishing, Hunting, and Wildlife Watching. In the Southwest Region, fishing generated $110 million in economic output, hunting $82 million, and wildlife watching $213 million. Fishing also generated $9 million in state and local taxes, hunting $6 million, and wildlife watching $16 million.[19]

Hunting, Fishing and Wildlife Viewing generate over $36 million in economic impact to Delta County...and an estimated $720,000 per year in sales taxes for Delta County.

16. *The Outdoor Recreation Economy*, Outdoor Industry Association, 2012, p. 1
17. *The Outdoor Recreation Economy: Colorado*, Outdoor Industry Association, 2012, p. 1
18. *The Economic Contributions of Outdoor Recreation in Colorado: A Regional and County-Level Analysis*, Southwick Associates, November 2013, p. 5 (*Hereinafter* SCORP Report)
19. *SCORP Report*, p. 6

Figure 1:
Share of Delta County sales tax revenue generated from three outdoor recreation activities. Source: Delta County Assessor, Southwick Associates and Citizens for a Healthy Community.

The SCORP Report found that in Delta County specifically, hunting generated $7.3 million in direct economic output, and $641,000 in state and local taxes.[20] The state and local tax determination includes sales taxes assessed at the state and local level. The state sales tax rate is 2.9%, and the Delta County rate is 2%.[21] Therefore we estimate that Delta County collected $146,000 in sales taxes from hunting-related activities. While hunting is the only category analyzed on the county level, we projected estimates of the economic impact of fishing and wildlife watching based on the percentage of the Southwest region's hunting-related revenue that was generated in Delta County. Hunting accounted for roughly 8.9% of the Southwest region's entire impact. Assuming that fishing and wildlife watching account for similar shares of revenue as hunting, fishing likely generated $9.79 million in output and $195,000 in Delta County sales tax. Wildlife watching likely generated nearly $19 million in output and $379,000 in Delta County sales tax. Hunting, Fishing and Wildlife Viewing generate over $36 million in economic impact to Delta County. See Table 2 for regional and Delta County economic impact and sales tax revenue, and Figure 1 for Delta County's share of sales tax generated from hunting, fishing, and wildlife viewing. These three outdoor recreation activities generate an estimated **$720,000 per year in sales taxes for Delta County**.

DELTA COUNTY ANNUAL SALES TAX FROM OUTDOOR RECREATION

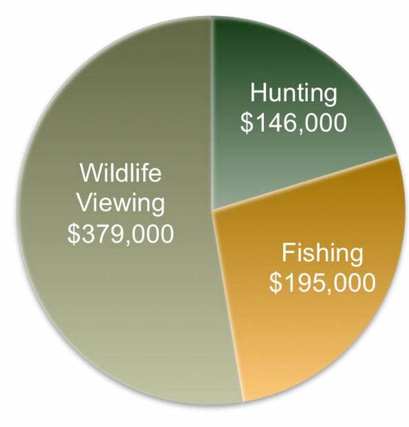


TABLE 2.
HUNTING, FISHING AND WILDLIFE ECONOMIC IMPACT.

ACTIVITY	SOUTHWEST DIRECT IMPACT	DELTA COUNTY DIRECT IMPACT	STATE SALES TAX	DELTA COUNTY SALES TAX	OTHER TAXES
HUNTING	$82,000,000	$7,303,000	$212,000	$146,000	$283,000
FISHING	$110,000,000	$9,790,000	$284,000	$195,000	$379,000
WILDLIFE VIEWING	$213,000,000	$18,957,000	$550,000	$379,000	$734,000
TOTAL	$405,000,000	$36,050,000	$1,046,000	**$720,000**	$1,396,000

Source: *The Economic Contributions of Outdoor Recreation in Colorado: A Regional and County-Level Analysis,* Southwick Associates, November 2013, and Citizens for a Healthy Community.

The SCORP Report includes income tax, municipal sales tax, property taxes, and other special district taxes,[22] but does not break them down sufficiently to provide a county-by-county analysis of these other taxes. However, it is likely that some of these other taxes benefit Delta County, and they are included in Table 2 to give a more complete picture of the economic impact these activities have on local finances.

20. *SCORP Report*, p. 9
21. *Colorado Sales/Use Tax Rates*, Colorado Department of Revenue, Taxpayer Service Division, December 2016, p.7 available at: https://www.colorado.gov/pacific/sites/default/files/DR1002.pdf
22. SCORP Report p. 14

Recreation revenue is directly impacted by nearby oil and gas development. In 2016, the National Park system set a record with 331 million visits. This is a 7.7% increase on 2015's previous record of 300.7 million visits.[23] However, according to a study by the Center for Western Priorities, visitation to five national parks with oil and gas development in neighboring counties decreased dramatically. The greatest decline was at Chaco Culture National Historic Park in New Mexico's San Juan Basin, which experienced a 43% decline in visitation over twenty-two years as the surrounding area saw 3,500 wells drilled nearby.[24] Of the parks surveyed, Theodore Roosevelt National Park in North Dakota's Baaken formation, experienced the least impact with a decline of 7%.[25] Across all five parks in the study, nearby oil and gas development resulted in an average 26% decline in visitation. For the purpose of this study, we applied this average rate to the sales taxes generated by recreation in Delta County to illustrate the potential impact from surrounding oil and gas development on Delta County's revenue. The impact to Delta County would be an approximate decrease in annual sales tax revenue of **$187,460**.

Oil and gas development resulted in an average 26% decline in visitation [to National Parks]

AGRICULTURE AND AGRITOURISM

Delta County and the North Fork Valley are a center for agritourism, organic farming, ranching, vineyards, and orchards. The exact value these economic activities contribute to Delta County via sales taxes is difficult to assess.

The 2012 US Census of Agriculture (hereinafter Agricultural Census) shows that Delta County's 1,250 farms, both conventional and organic, generated $55.6 million in agriculture-related sales.[26] In 2016, 9 vineyards in the North Fork Valley generated approximately $10 million in direct and indirect sales.[27] According to data from the Valley Organic Growers Association and the 2012 Agricultural Census, the 70 organic farms in the North Fork Valley generate $3.1 million dollars in sales.[28] There were 125 acres of grapes, 721 acres of peaches, 111 acres of pears, 12 acres of plums, and a total of 1,873 acres of non-citrus fruit.[29] In total, land and buildings used for agriculture in Delta County have an estimated market value of $832.9 million.[30]

---

23. *2016 National Park Visitor Spending Effects: Economic Contributions to Local Communities, States, and the Nation*, Natural Resource Report, Catherine Thomas & Lynne Koontz, April 2017 (*Available at:* https://www.nps.gov/subjects/socialscience/vse.htm) p. 1
24. *REPORT: On 100 Year Anniversary, Oil & Gas Development Threatens "America's Best Idea,"* Chris Seager, Western Values Project, August 2016, available at: http://westernvaluesproject.org/report-on-100-year-anniversary-oil-gas-development-threatens-americas-best-idea/
25. *Id.* at p. 4
26. *2012 Census of Agriculture, Colorado – County Data*, USDA, National Agricultural Statistics Service, 2012, *Table 2, Market Value of Agricultural Products Sold Including Direct Sales*, p 245-262 Colorado
27. Slow Food Western Slope
28. *2012 Census of Agriculture, Colorado – County Data*, USDA, National Agricultural Statistics Service, 2012, *Table 42 Organic Agriculture*, p. 482 Colorado
29. *2012 Census of Agriculture, Colorado – County Data*, USDA, National Agricultural Statistics Service, 2012, *Table 31, Fruit and Nuts*, p. 447-451 Colorado
30. *2012 Census of Agriculture, Colorado – County Data*, USDA, National Agricultural Statistics Service, 2012, *Table 8. Farms, Land in Farms, Value of Land and Buildings, and Land Use: 2012 And 2007*, p 300 Colorado

While commodity agriculture sales such as produce, meat, and poultry sales do not directly contribute to Delta County sales tax revenue,[31] value-added products such as wine, cider, jams, prepared and ready-to-eat food are subject to sales taxes.[32] While these value-added products sold on site at farms and farmers' markets contribute significantly to County sales tax revenues, there is insufficient information available to estimate this impact. According to the most recent studies conducted in Colorado in 2007, agritourism and recreation services generated a little over $2 million in revenue on farms in Delta County.[33] Research on how this spending translates to revenue for the county is currently ongoing, and this report will be updated as new information becomes available.

The orchards, vineyards and wineries in the North Fork Valley are widely visited. In 2016, one leading orchard in Hotchkiss saw approximately 21,000 visitors from outside the North Fork Valley, and one leading winery and orchard in Paonia had an estimated 15,000 visitors. According to the studies done by the Colorado Tourism Office, each visitor to Colorado generates $15.25 in local and state tax revenue.[34] Using visitor data from orchards and wineries, we estimate roughly 15,000 annual unique agritourism visitors to the North Fork Valley. We therefore calculate that agritourism in the North Fork Valley generates an estimated $228,750 annually in state and local taxes. Delta County's share, based on sales tax rate of 2.9% at the state level and 2% at the county level, is **approximately $93,400.** This number is expected to grow as the North Fork Valley continues to attract agritourists and grow its agritourism economy. Applying the same average decrease in national park visitation of 26% due to nearby oil and gas development to agritourism, we estimate a potential loss of **$24,275 of agritourism-related sales tax revenue**.

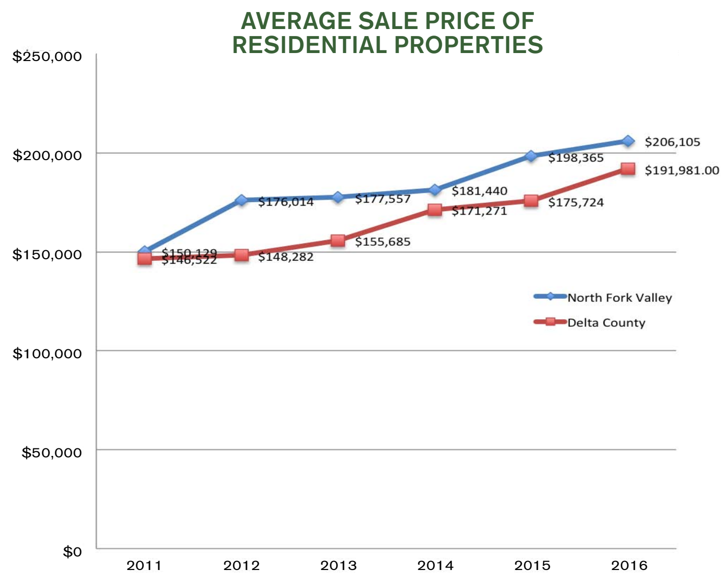
---

31. *Colorado Sales and Use Tax, General Information and Reference Guide*, State of Colorado Department of Revenue, November 2016, p. 9 (*Available at:* https://www.colorado.gov/pacific/sites/default/files/DR0099.pdf)
32. *Id.*
33. Analysis of: *The 2006 Economic Contribution of Agritourism to Colorado: Estimates From a Survey of Colorado Tourists*, Dept of Agricultual and Resource Economics, Dawn Thilmany, et. al, November 2007, *Agritourism in Colorado: A Closer Look At Regional Trends*, Dept of Agricultural and Resource Economics, Dawn Thilmany et. Al, July 2007, *Agritourism: A Potential Economic Driver in the Rural West*, Dept of Agricultural and Resource Economics, Joshua Wilson, et. Al, February 2006.
34. Analysis based on data provided in: *Colorado Tourism Office Reports All-Time Records for Visitation and Visitor Spending*, Colorado Tourism Office, July 2014, *Available at:* http://www.colorado.com/news/colorado-tourism-office-reports-all-time-records-visitation-and-visitor-spending

PROPERTY TAXES

Property tax makes up a significant portion of Delta County's revenues In 2016, Delta County collected a total of $13,668,831 in property taxes, with the largest portion going to the General Fund and the School Districts.[35] In Fiscal Year 2017, property taxes account for $3,942,727[36] of the General Fund's $10 million revenues, and $8,664,135 in School District revenue.[37] Studies have shown that property values decrease when oil and gas development, in particular fracking projects, are undertaken nearby.[38] Specifically, the perceived risk of groundwater contamination from nearby wells has been shown to cause a 26.6% decrease in property values, with proximity to fracking operations in general causing a net 16% decrease in property values.[39] The available data in these studies focuses on residential and agricultural property values. As such, this report does not address the impact of oil and gas development on vacant land or commercial property taxes.

Figure 2: Average Sale Price of Residential Properties. Source: Remax Mountain West.



A report based on data from the Delta County Board of Realtors showed that while the average sale price of residential property in all of Delta County has steadily increased over the last five years, the average sale price of residential properties in the North Fork is consistently higher.[40] See Figure 2 for average sale price of residential property in the North Fork Valley as compared to overall Delta County. According to 2016 data produced by the Delta County Assessor, residential property in the North Fork Valley, defined as the North Fork Pool, Park & Rec District, has a market value of $560,864,000, and a taxable value of $44,645,000.[41] See Figure 3 for a map of the North Fork Pool, Park & Rec District.

Applying the 2016 mill levy of 43.803 to account for County and School District taxes results in an estimated $1,955,330 in property taxes from residential property. Agricultural property in the same area has a market value of $23,112,000, and a taxable value of $6,702,000.[42] Applying the same estimated average mill levy results in an estimated $294,300 in property taxes from agricultural property. In total, the North Fork Valley's property taxes for residential and agricultural properties account for $2,249,646, or 16% of Delta County's property tax income.[43]

35 Summary of Assessments & Levies Delta County 2016, Debbie Griffith, County Assessor, 2016 (Hereinafter: Assessments)

36 Delta County 2017 Final Budget Public Copy (Adopted December 8, 2016) (Available at: http://www.deltacounty.com/documentcenter/view/9745)

37 Assessments

38. *Analysis: U.S. Drilling Boom Leaves Some Homeonwers in a Big Hole*, Michael Conlin, *Reuters,* December 2012. *See also: Drilling vs. The American Dream: Fracking Impacts on Property Rights and Home Values*, Resource-Media, March 2014

39. *Shale Gas Development and the Costs of Groundwater Contamination Risk*, Lucija Muehlenbach, et al., March 2013, p. 29

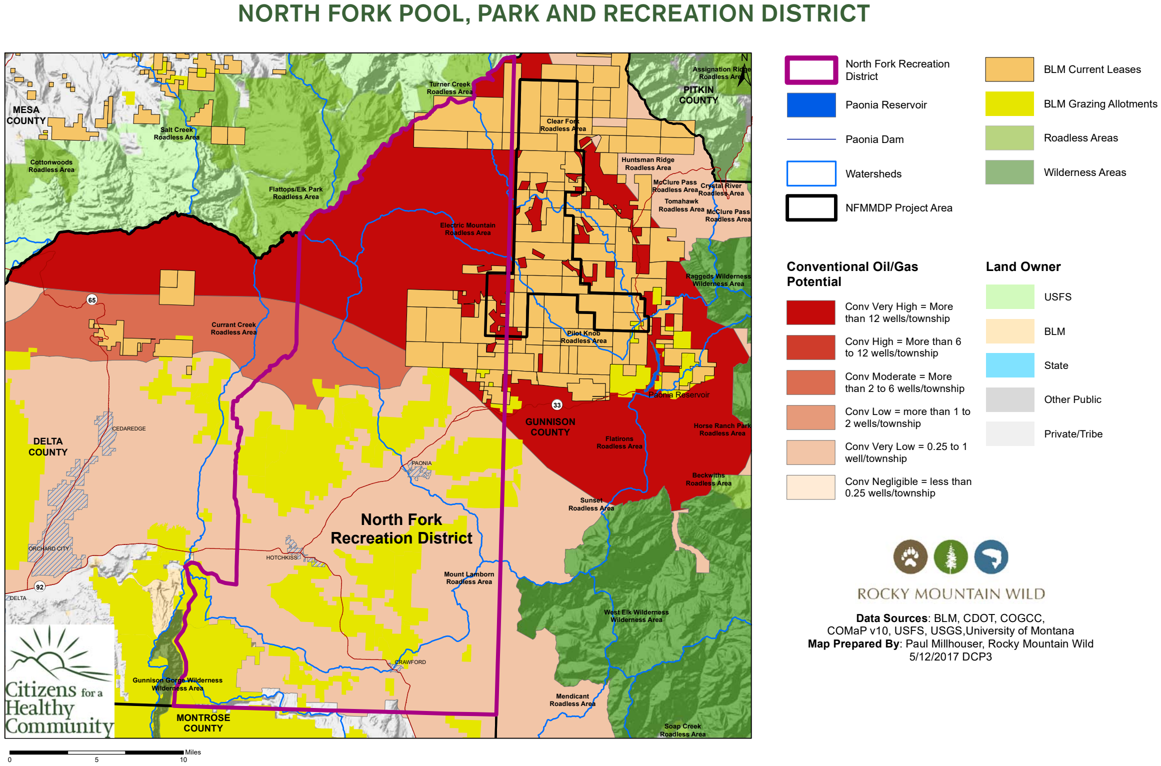
40. Average Sale Price for Residential Properties

41. Delta County Assessor's Office, 2016 Selected Authority Abstract, North Fork Pool, Park & Rec Report, March 14, 2017. (hereinafter 2016 Selected Authority Abstract)

42 2016 Selected Authority Abstract

43 Delta County includes vacant land in the residential and agricultural property assessed value and tax revenue collected referenced in *North Fork: Comparison of Assessed Value & Property Tax Revenue*, dated May 2017. CHC's analysis does NOT include vacant lands, because to our knowledge no research studies exist on the impact of oil and gas development on vacant land.

Figure 3: Map of North Fork Pool, Park, and Recreation District. Shows the Tax District used by the County Assessor to prepare the tax report used in this analysis. This map also illustrates that the Upper North Fork Valley represents high natural gas development potential as compared to the rest of Delta County. Source: Delta County GIS Office. Map Prepared by: Paul Millhouser, Rocky Mountain Wild for Citizens for a Healthy Community.

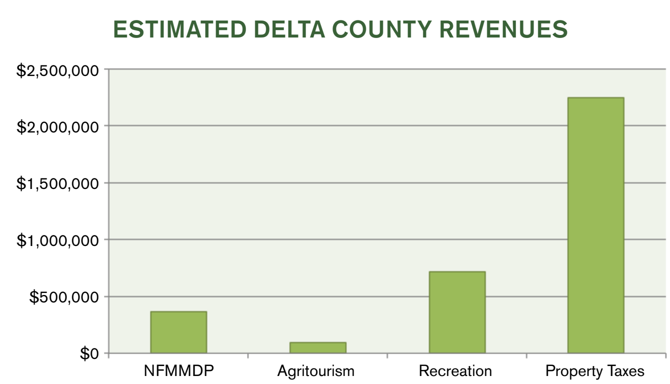


In addition, many owners of agricultural properties who have begun to expand their agritourism businesses to include production facilities and lodging have seen portions of their property reclassified, resulting in much larger property tax bills. These reclassified improvements are dependent on the agritourism industry, and will likely be negatively impacted by nearby oil and gas development. However, with the information available to date it is impossible to calculate this effect.

Residential and agricultural properties are the most likely to be adversely affected by the proposed development. Together, they account for $2,249,646 in property taxes for Delta County. Given the location of the NFMMDP in a fragile headwaters region, it seems likely that the 26.6% reduction in property values that arises from fear of water contamination discussed above will occur in the North Fork Valley. That fear of water contamination in the North Fork Valley could result in an estimated loss of $598,275 in property taxes for Delta County per year.

Figure 4: Comparison of estimated Delta County revenues from NFMMDP and other potentially impacted County income sources. *NFMMDP revenues are estimated at $308,000 to $367,000. The upper limit is used in the chart. Source: Citizens for a Healthy Community, Outdoor Recreation Industry, Delta County Assessor.

Taken all together, outdoor recreation, agriculture and agritourism, and property taxes contribute an estimated $3.1 million in annual sales and property tax for Delta County. See Figure 4 for comparison of these revenue sources. They are responsible for literally billions of dollars in economic output, and supply jobs for thousands of Colorado's citizens. Projects like the NFMMDP can put these revenues at risk.



IV. Local Government Costs Associated with Oil and Gas Development

According to the Duke University Energy Initiative study, the largest cost to local governments from oil and gas development comes from infrastructure-related impacts.[44] Other significant costs arise with increases in service demands and emergency response training.[45] The greatest increase in road-related costs tends to arise in areas experiencing heavy development for the first time.[46] This is particularly relevant for Delta County and the North Fork Valley, as this area has largely escaped large-scale oil and gas development to this point.

The Duke University Energy Initiative studies find that rural counties with little pre-existing development tend to experience the most negative net effects from oil and gas development as rapid increases in road use and service demands outstrip any increased revenue from the developments.[47] As an example, Rio Blanco County in Colorado has seen road repair and reconstruction costs skyrocket due to oil-and gas-related traffic, while revenues have stagnated.[48]

Delta County is likely to see a net-negative impact from oil and gas development for similar reasons. The geology in the area surrounding the proposed NFMMDP is uniquely unstable, and GELLC claims that each well will require 1,702 vehicle round-trips.[49] According to the Colorado Department of Transportation, Highway 133 near the project area currently sees roughly 1,200 vehicles per day.[50] Impact from these round trips will be felt on county roads such as County Road 265 as well. The NFMMDP proposes 35 new wells, each with 1,702 vehicle trips, for a total of nearly 60,000 round trips just for the drilling of the wells. While Delta County will feel the impact from each and every one of these round trips, it will only see revenue from three of the wells.

Infrastructure is not the only source of local costs. Emergency Response teams also tend to see increases in costs related to an increase in incidents, and new training requirements to deal with hazardous chemicals present in many oil-and-gas-related incidents.[51] In Garfield County, CO, annual spending on public safety increased nearly $14 million between 2003-2012.[52] Rio Blanco County was forced to nearly double their police department's budget between 2006-2010, to meet increased demands resulting from oil and gas development.[53]

44. *Shale Public Finance: Local Government Revenues and Costs Associated with Oil and Gas Development*, Duke University Energy Initiative, Daniel Raimi & Richard G. Newell, May 2014, p. 2 (Hereinafter: *Shale Public Finance*).
45. *Id.*
46. Local Fiscal Effects of Oil and Gas Development in Eight States, Duke University Energy Initiative, Daniel Raimi & Richard G. Newell, May 2016 p. 4
47. Shale Public Finance, p. 54
48. *Id.*
49. NFMMDP, p. 32
50. Colorado Department of Transportation, Online Transportation Information System, available at: http://dtdapps.coloradodot.info/otis/trafficdata#ui/2/1/0/station/104553/criteria/104553/
51. *Shale Public Finance,* p. 5-6.
52. *Id.* p. 53
53. *Id.*

V. Conclusion

The three proposed wells in Delta County from the NFMMDP project are estimated to generate between $307,000-$367,000 per year in oil and gas property and severance tax revenue to Delta County over the 30-year life of the wells. However, this same project has the potential to result in a loss of $24,275 in agritourism sales tax revenue, $187,460 in outdoor recreation sales tax revenue, and a loss of $598,275 in property tax revenues for a net annual loss of $810,000 to the County or $24.3 million over the 30-year life of the proposed project. See Table 3 for the breakdown of revenue impact and Figure 5 for the graphical representation of the net revenue impact to the County. Finally, the County will be responsible for potentially large increases in road repair costs due to increased traffic on fragile county roads, as well as increased public safety expenses.

Figure 5: Net Estimated Impact of Oil and Gas Development On Delta County Revenue Source: Citizens for a Healthy Community.

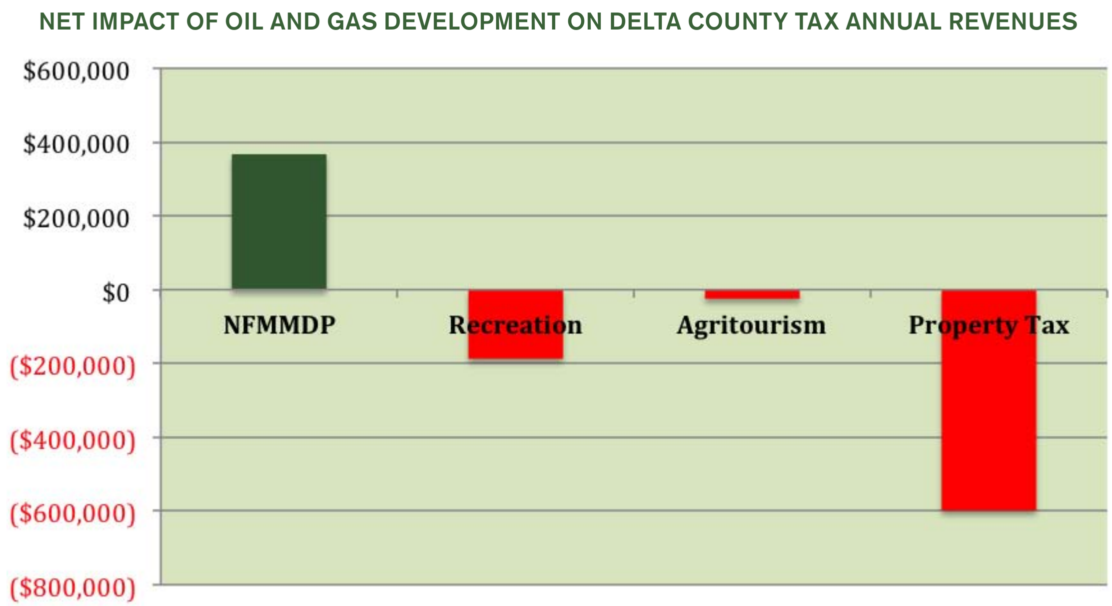


TABLE 3.
NET ESTIMATED REVENUE IMPACT DUE TO NFMMDP

Revenue from NFMMDP	$307,000 - $367,000
Change in Agritourism Revenue	-$24,275
Change in Recreation Revenue	-$187,460
Change in Property Tax Revenue	-$598,275
NET REVENUE IMPACT:	**-$443,000- $503,000**

Source: Citizens for a Healthy Community

The North Fork Valley is an economic engine for Delta County. Our research suggests that the County Commissioners should rethink the true, long-term value of oil and gas development, and in particular the NFMMDP, on the future of Delta County. This study is a first step in better understanding the costs and benefits associated with oil and gas development proposals. We recommend that further research be undertaken by the County and other stakeholders that extends to commercial property taxes, and other aspects of outdoor recreation such as hiking, biking, cross-country skiing, snowmobiling, and more to improve the cost/benefit analysis of oil and gas proposals in the North Fork Valley.

Citizens for a Healthy Community
Office: The Harvester Building, 211 Grand. Ave, Paonia, CO 81428
Mailing address: PO Box 1283, Paonia, CO 81428
Phone: (970) 399-9700
www.chc4you.org

Citizens for a Healthy Community