

FISCAL AND ECONOMIC BENEFITS OF COALBED METHANE (CBM) EXTRACTION AND WATER PRODUCTION IN LAS ANIMAS COUNTY

CBM PRODUCTION

- In 2011, CBM operators in Las Animas County produced almost 100.8 billion cubic feet of gas, about 6% of total U.S. CBM production
- Las Animas County is the second largest producer of CBM in Colorado, with production value of \$448.8M in 2011
- In 2011, about 3,000 CBM wells were in production, up from about 475 wells in 1999
- CBM industry activities within Las Animas County cover 475 square miles (about 10% of the county)
- Between 2004 and 2011, CBM operators produced an average of 12,100 acre-feet of water per year. About 2/3 of that is discharged into streams and 1/3 is re-injected
- The water quality of the Purgatoire River, including CBM water, is acceptable for agricultural, recreational, aquatic life and water supply purposes

Between 7,000 and 8,000 acre-feet of CBM produced water is discharged into Purgatoire River tributaries each year

Tax and Royalty Benefits

In 2011, CBM operators paid an estimated \$6.2 million in Las Animas County property taxes, or 39% of total County property taxes. About \$3.5 million was distributed to local school districts, \$2.2 million went to Las Animas County government, and about \$500,000 went to various local improvement and service districts within the County.

Las Animas County jurisdictions received \$770,000 in state severance

tax revenues and \$455,000 in Federal Mineral Lease (FML) revenues in 2011.

CBM operators pay severance taxes directly to the state; the amount of severance tax and FML revenues received by Las Animas County jurisdictions depends on the number of resident industry employees, mining and well permits and level of gas production.

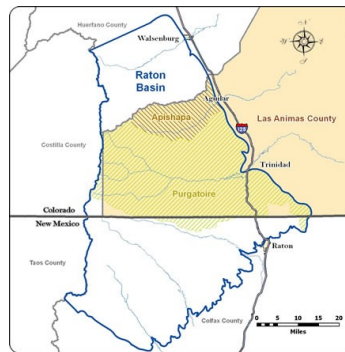
CBM companies paid more than \$1.5 million in royalties to the State of Colorado for

production on state lands and more than \$6.6 million in royalties to Las Animas County landowners in 2011. These royalties increase income levels, commercial expenditures and tax revenues within the County.

CBM operators paid more than \$300,000 in local sales tax in 2011.

Produced water supports agriculture, recreation and tourism activities in Las Animas County, all of which contribute to the local economy in terms of retail sales and

sales tax revenue. Together, these CBM-related fiscal benefits are wide spread and substantial for Las Animas County jurisdictions as well as residents.



Revenues from CBM Activity

	Severance Tax Revenue	Federal Mineral Lease Revenue	Total
Las Animas County	\$431,000	\$235,000	\$666,000
Trinidad, & Other Towns	\$338,700	\$184,050	\$522,750
Schools	\$0	\$35,600	\$35,600
Total	\$770,000	\$455,000	\$1,224,400

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Impact of CBM Activity on Local Employment, Income and Retail Sales in Las Animas County

	CBM Industry-Related	County Totals
Direct Employment	597	NA
Total Employment	1,507	8,207
Annual Average Wage	\$66,000	\$33,200
Direct Income	\$57.4M	NA
Total Income	\$79.7M	\$272.6M
Direct Sales of Goods and Services	\$58.7M	NA
Total Sales of Goods and Services	\$84.5M	\$341.7M

* NA indicates the data are not applicable

Economic Impact of CBM Produced Water on Agriculture and Recreation

CBM produced water contributes about 4,000 acre-feet to the mainstem of the Purgatoire River each year (about 8% of total annual flow). **The availability of CBM water adds nearly \$2.0 million to County agricultural sales each year, resulting in roughly \$3.5 million in total annual local economic activity.**

In 2010, CBM produced water helped support more than 40 agricultural jobs and more than 80 total jobs in Las Animas County, with associated total personal income of about \$630,000.

CBM produced water supports recreational activities, including fishing, hunting and boating. CBM water flowing into Purgatoire River tributaries creates aquatic habitat for fish and other species.



Discharge points support ponds and create watering holes for wildlife species throughout the area. **CBM water supports up to \$3.7 million of hunting activity in Las Animas County annually.** There is also a direct correlation between water levels in Trinidad Lake and State Park visitation. **The addition of CBM water in Trinidad Lake contributes about \$730,000 in total local visitor spending to the County's economy.**

Future of Las Animas County CBM Production

The Raton Basin has an estimated 20 to 40 years of productive life remaining. Under favorable conditions, up to 100 new wells per year might be drilled for the next 12 years or more. The pace and amount of future CBM extraction and water production depends on:

- ◆ Gas prices – natural gas prices are volatile
- ◆ Production costs, including drilling, materials and transportation costs
- ◆ Costs of produced water treatment and injection

Regulation of produced water impacts disposal costs and affects the amount of gas and water production. Changes in permit limits or other regulations could result in re-injection of all CBM produced water in the County or industry curtailment.

Sources: Harvey Economics obtained data and information from federal and state agencies, CBM operators and interviews with local groups and landowners.