

Effects of Petroleum Industry on County Government Costs in North Dakota

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Report prepared for the North Dakota Association of Oil
and Gas Producing Counties

Objective

**Document how changes in oil and gas
exploration and production have affected
the cost of providing county government
services in North Dakota**

Approach

- Survey county officials -- ask county officials to document the effects on their individual office
- Use survey results to generate projections of cost increases for oil and gas producing counties

Survey

What did we ask?

- General (non-road) offices
 - Changes in office workload
 - Changes in cost of providing services
 - Ability to offset costs from new/increased fees & charges
- Road departments
 - Information on maintenance, repair, and construction operations on impacted and non-impacted roads

Survey Response Rate

- 59 offices/departments in 14 counties (only Ward and Bottineau Counties absent)
 - 13 road departments
 - 4 or more responses each from offices of auditor, sheriff, treasurer, r. of deeds, social services, c. of court, & tax equalization
 - equates to about a 30 percent response rate

General County Offices

With respect to only changes in petroleum sector activities in the past 12 months

- 79% of offices reported increased workloads
- Offices internalized the additional workload (added staff, extra hours for existing staff, purchased equipment)
- Increased workload = increased costs (69 percent of offices with increased workloads reported costs increased, compared to 10% of offices without changes in workload)
- Overall, about 60% of general offices reported cost increases

General Offices

Areas of Additional Expense

Expense Types	Number	Percent
More supplies/inputs	25	89.3
Added equipment	21	75.0
Increased hours for staff	20	71.4
Hired full-time staff	12	42.9
Higher wage rates	11	39.3
More clients/applicants	10	35.7
More training/recruitment	8	28.6
Hired part-time staff	5	17.9

General Offices

Cost Projections

- Survey responses stratified based on county-level changes in petroleum output in last two years
 - Do not assume impacts equal in all counties
- Survey responses averaged across all county offices
 - Avoid estimating costs for specific offices

General Offices Cost Projections

High Impact Counties Billings, Bowman, Dunn, McKenzie, Mountrail, and Williams	
Average <u>net cost</u> increase per general office in last 12 months (average of all offices with and without cost increases)	\$24,769
Estimated number of county offices multiplied by average net cost increase per office	\$1,659,000

General Offices Cost Projections

Moderate Impact Counties	
Average <u>net cost</u> increase per general office in last 12 months (average of all offices with and without cost increases)	\$10,662
Estimated number of county offices multiplied by average net cost increase per office	\$1,120,000

General Offices Cost Projections

Estimate of Cost Increases over Past 12 Months	
High Impact Counties (about \$276,000 per county)	\$1,659,000
Moderate Impact Counties (about \$112,000 per county)	\$1,120,000
All Counties	\$2,779,000

Road Departments Unique Challenges

- Effects in each county are different
 - Miles of roads affected
 - Type, capacities, characteristics of impacted roads
 - Geographic distribution of oil activity within county
 - Intensity of road use / traffic patterns
 - Costs for road operations
- Escalating input costs (e.g., gravel, fuel) not tied to petroleum sector use of roads
- In absence of petroleum industry, still have road maintenance costs

Road Departments

Unique Challenges

- Need to evaluate costs over broader time frames
(majority of road operations not performed on all roads each year)
- Complex problem -- does not lend itself to relying on a single answer from road departments
- A different questionnaire and analysis was used

Road Departments

Questionnaire

- County officials provided the following for impacted and non-impacted roads
 - Miles, by road type
 - 12 separate maintenance, repair, and reconstruction/surfacing operations
 - Cost per mile
 - Frequency of need
 - Miles of need in next three years
 - Questionnaire developed by Dan Brosz, Brosz Engineering, Bowman, ND

Road Departments General Findings

- Impacted vs non-impacted roads
 - Frequency of need is substantially higher (i.e., how often a particular operation is required)
 - Greater disparity with the most costly operations (e.g., reconstruction, resurfacing)
 - Nearly all road operations more expensive (\$/mile) to perform on impacted roads than on non-impacted roads

Road Departments Cost Projections

- Cost of maintaining impacted roads
- Cost in absence of oil industry
 - Applied non-impacted road data to impacted roads
 - Cost per mile by road operation
 - Frequency of need by road operation by road type
 - Miles impacted by road type
- Difference between the two estimates

Road Departments Cost Projections 2008 through 2010

		Avg Cost Analysis		Ratio Analysis	
Counties*	Impacted Roads (6,700 miles)	Non-impacted Status	Net Cost Increase	Non-impacted Status	Net Cost Increase
	----- 000s of 2007 dollars -----				
Total**	110,880	22,030	88,850	24,830	86,050
Avg Annual	36,960	7,343	29,617	8,277	28,683
Avg Annual Per County	3,360	668	2,692	752	2,608

*Counties with useable data from survey were Billings, Bowman, Burke, Dunn, Golden Valley, McHenry, McKenzie, Renville, Slope, Stark, and Williams.

**Does not include snow removal, weed control, or mowing.

Summary Cost Projections

Costs	Low Estimate	High Estimate
Roads	\$34.1 million	\$42.4 million
Responding	\$2.65 million x 11 counties	\$2.65 million x 11 counties
Non-responding*	\$1 million x 5 counties	\$2.65 million x 5 counties
General Offices	\$2.8 million	\$2.8 million
Total (2007 \$)	\$36.9 million	\$45.2 million

* Regards assumptions on costs for road impacts in counties that did not respond to the survey. Personal interview with Mountrail County revealed \$1 million increase in road costs from FY07 to FY08.

Conclusions

- Expansion of oil and gas sector has led to increased workload for majority of county offices
- Increased workloads = increased costs
- Financial impacts of oil and gas on maintenance of rural roads are substantial

Final Thoughts

- Financial burden of increasing costs of providing county services?
 - Are current levels of tax re-distributions sufficient?
 - Effect on county residents/tax payers?

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