

# **Stakeholder Relations Research for Pinedale, Wyoming**

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**Rice University Student Research Paper**

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## **Acknowledgements**

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The paper was produced under the overall supervision of Dr. Marc Epstein and Dr. Sally Widener from Rice University's Jones Graduate School of Management. Analysis occurred between June and December 2004. Research, including on-site interviews in the Pinedale area, was conducted by the students who prepared the report: Rachel Gelman, Class of 2006, and Nicolas Lacouture, M.B.A. '04.

We wish especially to thank the residents of Sublette County for their cooperation in this research, as well as representatives from business, government, and nongovernmental organizations for their participation. It is our sincere hope that the report will be of assistance to all concerned parties in their efforts to analyze the relationship between conservation and energy production.

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## **Executive Summary**

Pinedale, Wyoming, a town of 1,500 located in western Wyoming's Sublette County, is facing important decisions regarding sustainable development. Natural gas production has increased rapidly over the last decade, raising concerns about how to balance gas development with environmental preservation. This report assesses public perception of and opinions about gas exploration and production and other types of development with respect to environmental preservation. Our goal was to identify these issues, understand the possible causes, and present recommendations and solutions to alleviate these issues. Stakeholder interviews, background research, and two surveys (one of Pinedale residents and another, identical survey targeted nationally) revealed the importance of responsible residential and gas development. Our results suggest that Pinedale residents are amenable to compromises that take into account economic, environmental, and quality-of-life factors to achieve a balance between development and environmental protection.

## **Overview of Community Concerns**

The town of Pinedale, Wyoming, is facing important decisions regarding sustainable development. Natural gas production has increased rapidly over the last decade in Pinedale, raising concerns among various stakeholder groups about the long-term impact this industry may have on the area. Concerns generally fall into three categories: environmental impacts, economic impacts, and safety.

A foremost concern is the impact that gas exploration and production have on wildlife populations, particularly those of big game animals such as pronghorn antelope and mule deer that migrate from the Yellowstone National Park area to Sublette County in the winter months. Residents worry that the populations are decreasing because of a narrowing of migration corridors due to land fragmentation caused by residential expansion, gas drilling, and fencing for ranching in the Pinedale area. If migration is cut off due to land fragmentation, it could potentially sever the antelope from the Teton area. However, the argument exists that the animals are not affected by land fragmentation at all and will migrate over roads to find an adequate supply of food. This argument points to other causes, such as lasting drought and particularly severe winters, for decreasing wildlife populations. In addition, hunting these migratory animals is not prohibited, raising the question of why hunting is allowed if wildlife populations are indeed decreasing.

Concerns have also been expressed about how gas exploration and other development impacts non-migratory animal populations, particularly the sage grouse, a ground-dwelling bird that depends on sage brush, a common vegetation in the Pinedale region, for shelter and food. The Pinedale Anticline, a major field for gas drilling, is considered crucial habitat for the sage grouse as well as Pinedale's larger, migratory animal residents. Activity in the Pinedale Anticline during the winter could impact wildlife by impeding migration and the search for food and shelter. Therefore, crucial winter ranges are currently restricted from any new developmental drilling annually from November 15–April 30.

Other environmental issues related to the production of gas drilling include visual disturbances, such as flaring (the ignition of gas particles during the well completion process) and rigs lit at night, and noise pollution from drilling. These issues are also tied to air and water pollution resulting from an increase in traffic to service wells and the production process of natural gas.

Economically, the winter moratorium on new drilling may be causing a yearly boom-bust cycle in the economy of Pinedale. Lower paying service jobs, such as working in restaurants, are sometimes lost to the gas companies, who can afford to pay their workers substantially more. During the summer months, when most of the gas operations occur, restaurants and other businesses sometimes face a shortage of workers. Motels remain packed with seasonal workers during the summer months, making it difficult for visitors to find vacant rooms during this popular season. With increased stresses on the infrastructure, Pinedale is currently working on updating the pipeline and sewage system.

In addition, with the increase in seasonal workers during the summer months, residents of Pinedale fear an increase in the crime rate.

Safety is another issue that has raised concern, especially among energy industry employees. Since many gas companies have a small window of operation due to the moratorium on drilling, they must set up and, more critically, ramp down their rigs in a short period of time. This rush is potentially hazardous to company employees and their contractors.

### **Research Methods**

All of these problems and concerns may have multiple causes and in order to suggest accurate and feasible solutions to these problems it is necessary to gain a better understanding of what the causes are. In this study, four types of research methods were implemented.

#### *A survey of the local population*

A paper survey was mailed to households in Sublette County. It focused on balancing residential and gas development and environmental protection. The purpose of this survey was to determine the public's attitude about environmental protection and residential and gas expansion and their beliefs about the main problems surrounding these issues. We received responses from over 650 residents.

#### *Stakeholder interviews*

Extensive interviews with key stakeholders and representatives of various local organizations were performed to better understand the issues that were most imperative to the study. Two researchers lived in Sublette County for six weeks and conducted multiple interviews on a daily basis. Employees of gas companies, representatives of conservationist and environmental groups, government leaders, ranchers, and residents of Pinedale were among the groups interviewed. Speaking to people that are impacted by and involved with these issues provided more of a context and a better perspective of the situation at hand.

#### *Archival data*

Archival data was used to determine whether concerns raised had concrete evidence. We collected data from sources as diverse as the Bureau of Land Management, the Pinedale school district, Wyoming Game and Fish, crime reports, the Sublette County Chamber of Commerce, environmental organizations, and several gas companies.

#### *A survey of the national population*

A national online survey was conducted through the nationally known polling company, Zogby International. An identical survey to the one that was mailed out to Sublette

County residents was used so as to determine the views and values of non-Wyoming residents regarding residential and gas expansion. We received over 1000 responses from the national survey.

### **Results and Discussion**

The local surveys suggested that the residents of Sublette County are concerned about the environment. Sustaining wildlife populations and maintaining clean air and water sources are very important to them (see Exhibit A) . Our national survey also suggested that people across the nation are similarly concerned about the environment in Wyoming.

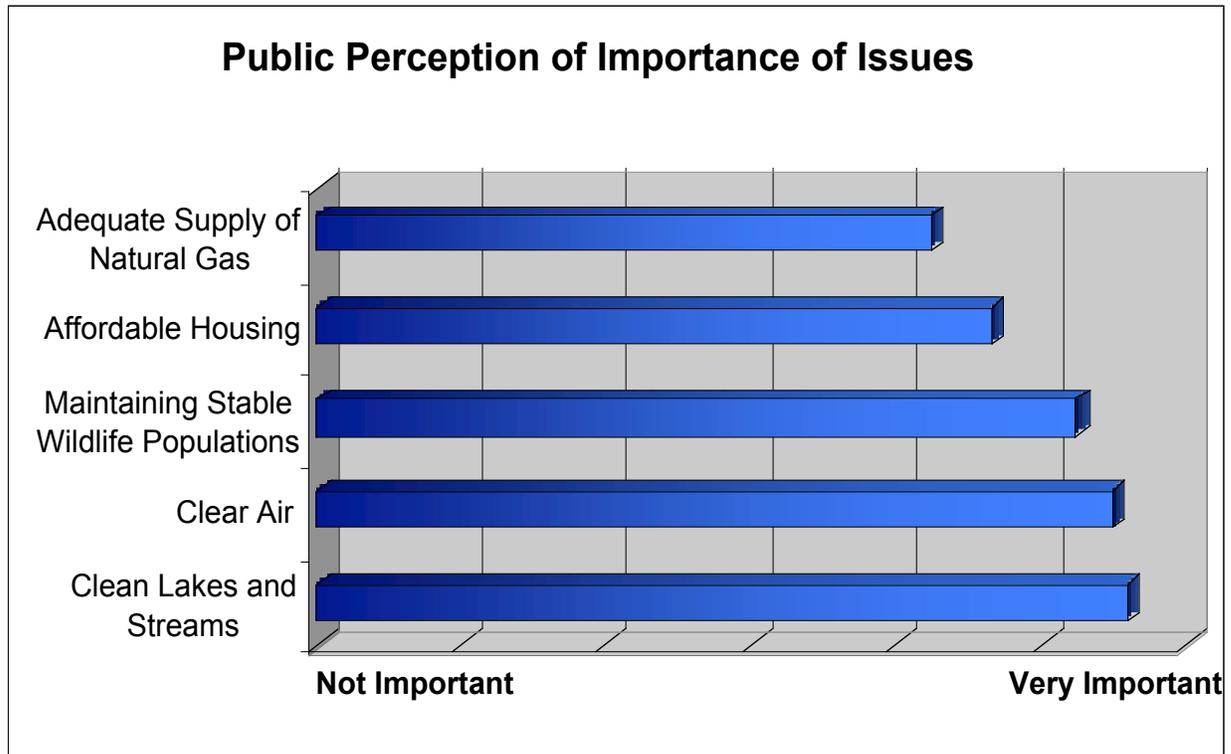


Exhibit A

Our archival analysis and interviews with local groups in Sublette County revealed little evidence of a dramatic change in the animal populations. However, wildlife populations do face numerous threats from such factors as gas drilling, residential expansion, hunting, and drought. Our archival research found that the fencing used for ranching and fragmentation due to roads and power lines are some of the primary factors impeding migration, causing more stress to the animals, and possibly contributing to increasing mortality rates. Land fragmentation can occur both on the public land used most often for gas development and on private land, which is often utilized for residential expansion. The most crucial migratory bottleneck in the Pinedale area, Trapper's Point, is on public land, and there are currently valid land leases in the area. Yet the land has yet to be developed. Pinedale has seen increased real estate development due to a growing retirement community and individuals seeking the quintessential spot of land to reside on, which they often find in Pinedale. Based on the survey results, approximately 25 percent

of respondents were retired. Others are moving to Pinedale from Jackson due to the skyrocketing costs of living in that area. Plus, gas companies are purchasing housing for their employees because motels are completely booked throughout the year.

Nevertheless, despite the lack of evidence for declining animal populations and the presence of other explanations for any declines that might be tracked, our survey revealed that the public in Sublette County perceives residential and gas development as greater threats to the environment than fencing and infrastructure (see Exhibit B). Nationally, the public also perceives residential and gas development as greater environmental threats.

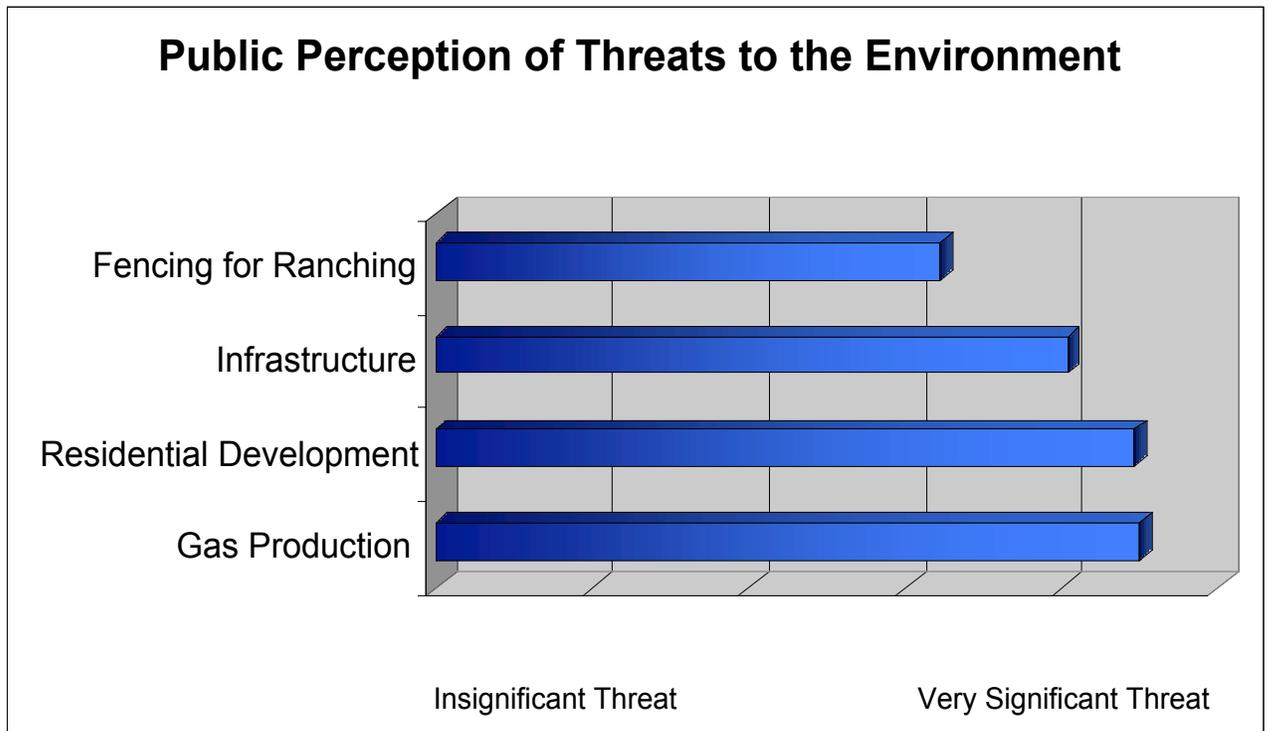


Exhibit B

Interviews revealed that visual disturbances and noise pollution associated with gas drilling on the Pinedale Anticline have raised concerns from many residents. Some residents are able to see the rigs at night from their homes, since 24-hour drilling requires the rigs to be lit. Emissions from gas drilling may also be impacting the air quality in the Pinedale area. Also, trucks carrying supplies and products to and from the wells create dust clouds on the dirt roads and impact air quality. One of the proposed solutions for this problem was to lower speed limits on access roads and highways, but there are questions about such a law's enforcement and effectiveness.

While more affordable real estate, lower cost energy, and environment and wildlife preservation are all generally desirable, a tradeoff must often be made between development and preservation. The surveys showed that residents believe that protecting the environment is an important issue (Exhibit A) and that they are concerned about the effects of development on the environment (Exhibit B). Respondents were asked to

choose between preserving the environment and development, and the results appear in Exhibit C. The residents of Sublette County feel slightly stronger about wildlife preservation, at the expense of higher cost energy, than they do about wildlife preservation and residential development. In addition, residents lean toward protecting the environment over development. However, it is clear that the majority of respondents favor a balance of development and environmental preservation, as most of the responses are in the middle. Our results show that residents want development to occur, while also considering the interests of wildlife and the environment.

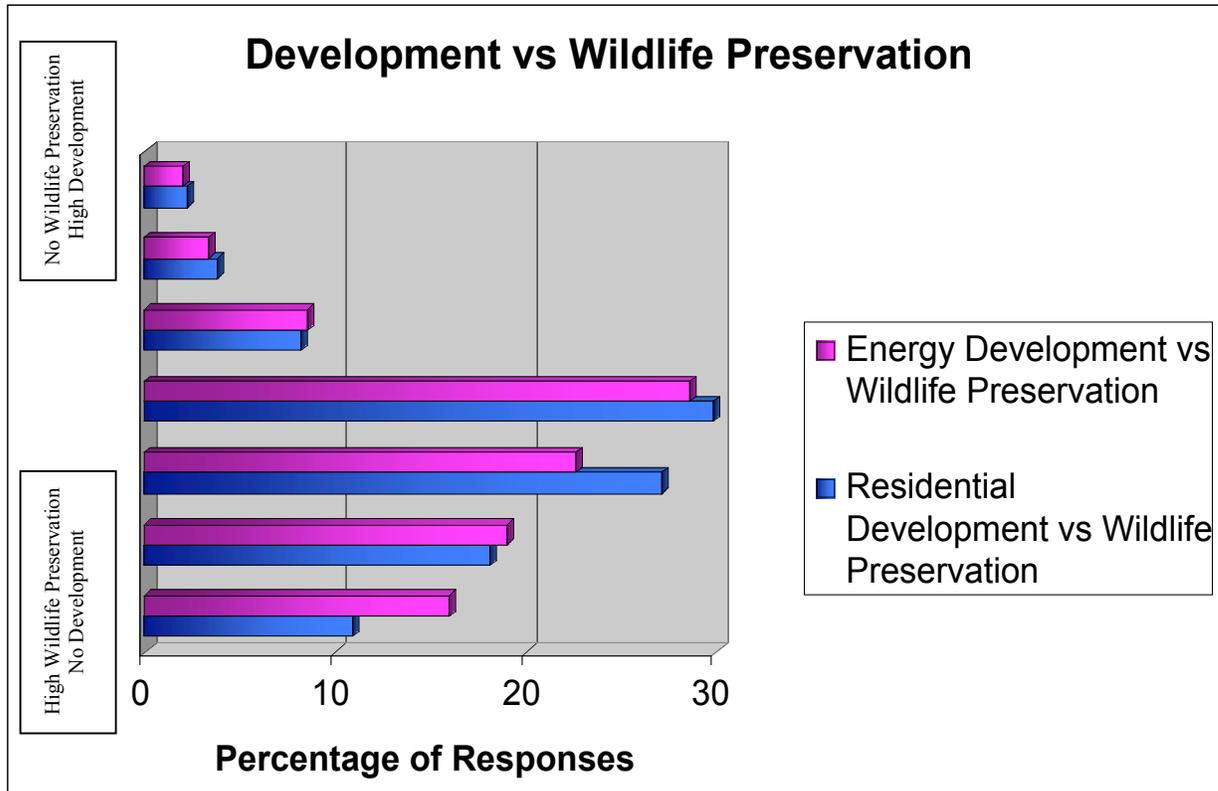


Exhibit C

Our national survey results were similar to the local survey results in regards to residential development versus wildlife preservation; however, when asked about energy development, the respondents were even more committed to preserving wildlife even at a cost to energy development. Even though the vast majority of the national survey respondents do not live in Wyoming and may have never even visited Wyoming, they would rather see the wildlife preserved than be negatively affected by energy development.

Sublette County faces wide variations in population during the year. Many of the area’s restaurant and motel owners choose to close their businesses in the winter months, when there are fewer tourists. The cycle would likely occur whether the oil companies were present or not, due to the decrease in the volume of tourism. During the summer months, motels and restaurants often face a shortage of employment due to vacationers or gas

companies, who can afford to pay higher wages. Aside from the restaurants and motels, the other businesses in Pinedale appear to be rather stable and less affected by the yearly boom/bust cycles. Seasonal increases in crime and the danger of well sites ramping up and down very quickly will likely continue to exist if six-month drilling remains.

Managing wildlife populations through hunting is an effective way of balancing wildlife populations with capacity of the winter ranges. Often, annual mortality rates lag birth rates, and hunting levels are set to control natural growth and balance population size with habitat capacity. Hunting acts as a short-term controlling agent for wildlife population sizes and provides a source of income for Wyoming Game and Fish. Collections are used to fund studies on antelope, mule deer, and other animals in the area. Hunters have an obvious interest in maintaining adequate population sizes. They have created a symbiotic relationship with Wyoming Game and Fish in which both groups depend on each other to pursue their objectives. Whether this is an appropriate method for managing wildlife populations is ultimately for the stakeholders to decide.

Although hunting is a popular recreational activity in the Sublette County area, far more popular are fishing and other outdoor activities, including camping, hiking, off-highway vehicle use, mountain biking, and snowmobiling. When asked in our survey about the amount of money spent on these activities, respondents said they spent more annually on outdoor activities and fishing than they did on hunting, and would be more willing to pay for an increase in the costs of these activities than they would on hunting (see Exhibit D). The results from the national survey are similar to the local survey, in that fishing and outdoor activities other than hunting are the most popular outdoor activities in Wyoming. Our results show that how respondents spent their leisure time is directly related to what they care about and how much they are willing to pay to sustain the activities. The ranking of activities in each of the categories are the same, showing that the respondents are committed to certain activities and are willing to make expenditures so that they may continue to enjoy them. Although many do not actively participate in hunting, people enjoy simply being outside, and the public seems to want a general preservation of the environment. In addition, residents are concerned that public land, which functions to provide multiple uses to all inhabitants, becomes single use with the onset of a gas drilling lease.

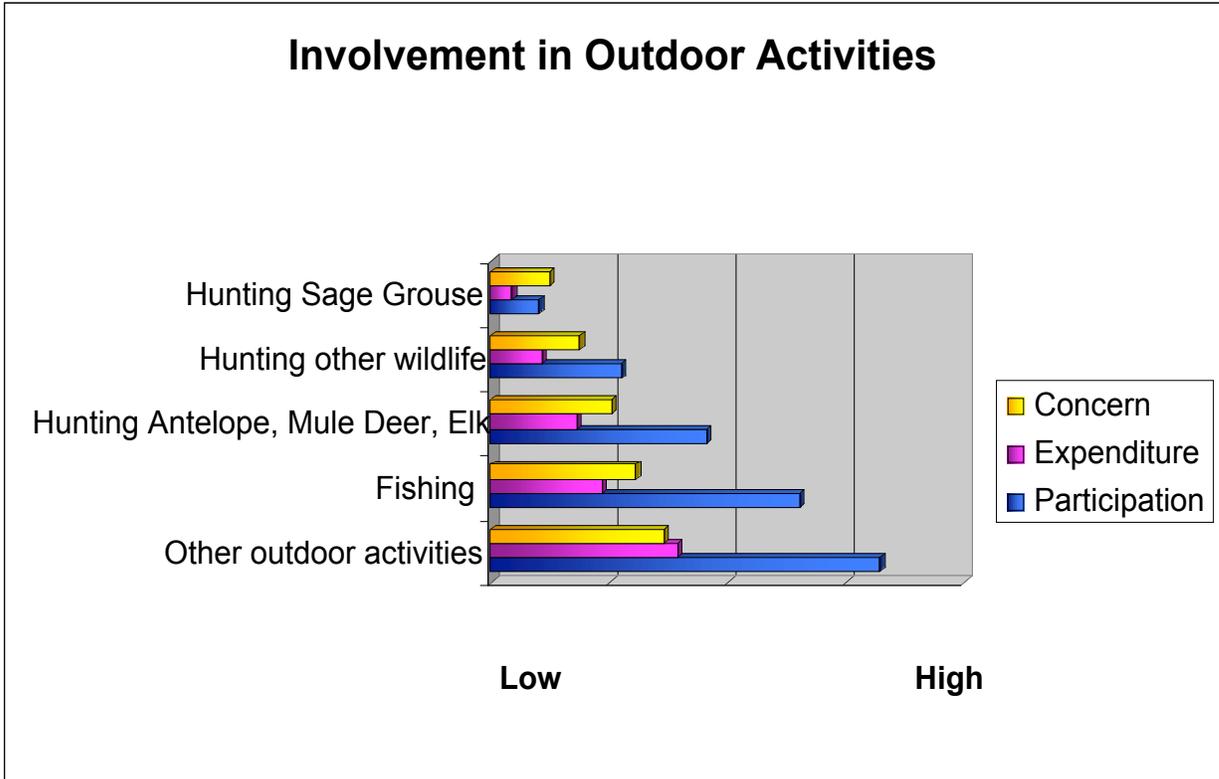


Exhibit D

In our interviews, we also asked about the benefits of gas drilling. As a result of property and severance taxes paid by gas companies, in addition to royalties paid for gas produced on federal lands, the gas development in Sublette County has benefited the education system and other public establishments. The community is using the additional funding to build public facilities, including a new county courthouse and an aquatic center. The school district has also benefited from surplus funds, creating a small-class atmosphere and motivating teachers through higher salaries. Graduating seniors are often awarded scholarships donated by gas companies.

**Conclusions and Recommendations**

Some say that the character of the West is open space and that this character is slowly being lost due to residential and industrial development. People seek open space for respite and refreshment, yet maintaining this open space is difficult, as it requires sacrifice to sustain balance. The dramatic increase in gas production in Sublette County over the last decade has made many residents concerned about environment and wildlife preservation. However, the residents of Sublette County are aware that it is beneficial to continue and possibly increase development, and they are not looking to cease gas development completely in order to keep the environment undisturbed. Rather, residents want to see a balance between development and preservation of the environment.

Nationally, respondents share the same beliefs as Sublette County residents about threats to the environment and important environmental issues. Respondents also want to see the

environment of Wyoming preserved, although they may never even visit the state. The respondents may find solace that undisturbed wildlife exists in areas other than near their homes, and that other people may have the opportunity to enjoy this wildlife, although they may never see it themselves. Respondents value preservation of the environment because they want other people and future generations to have the opportunity to enjoy nature. Non-Wyoming residents, like the residents of Sublette County, would like to see a balance attained between development and environmental protection.

One of the most debated topics in Pinedale is directional drilling, particularly on crucial winter-range habitats. Although more costly than traditional vertical drilling, directional drilling would decrease the amount of land fragmentation and surface disturbances by allowing multiple wells to be drilled from a single pad. It would lessen traffic, thereby decreasing noise and air pollution, because multiple wells could be serviced from one location. If directional drilling were implemented, it may be that Wyoming Game and Fish would permit gas companies to drill year-round. This dramatic change in the drilling schedule would have a major effect not only on the gas companies, but also on Sublette County.

A benefit from the institution of year-round drilling is the increase in safety for gas-company employees and contractors. There would no longer be rushed ramping up and down of rigs twice a year in order to abide by the moratorium on drilling. In addition, new workers would not have to be trained each year, since year-round drilling would bring employee stability. Workers would be able to spend more time in the community and with their families. A decrease in crime might be observed. Year-round employees are likely to be more committed to protecting the wildlife and other issues than short-term employees. The increase in year-round workers would likely cause growth in the town of Pinedale, but this growth could bring greater social and economic stability.

One way for gas companies to decrease visual disturbances is to camouflage their equipment and place it behind hills or other natural obstructions where possible, which many companies do already. Flaring is noisy and causes a visual disturbance. However, with the introduction of new technologies, many companies are now able to perform flareless completions on their wells. If these new technologies are available, our research indicates that the residents would like this implemented in order to minimize the negative impacts of the drilling process.

Residential development must be completed in a responsible way as well. One possible approach is to adjust zoning where migration routes exist. These zones would have higher density zoning outside of the water areas, which would be considered common area. With this plan, migration routes would be preserved and development demands would be satisfied. In addition, the fencing used for ranching could be converted into game-friendly fences that animals can easily traverse.

Our research shows that the residents of Sublette County do want residential and gas development to continue, but in a responsible manner, since these are currently perceived as two of the major threats to the environment. Sustaining stable wildlife populations and

maintaining clean air and water sources are very important to the residents of Sublette County. By developing real estate and gas reserves in a responsible way, a balance between protecting the environment and continuing development may be achieved.