

Community Resident Perceptions of the Oil & Gas Activity & Industry in the Eagle Ford Shale Play

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Executive Summary

This report summarizes initial results of focus group interviews in two communities in the Eagle Ford region of South Texas, where rapid oil and gas development has been occurring since 2008. The interviews were designed to capture local perceptions of the oil and gas industry and implications of exploration and development activities for community well-being. The research summarized here is a part of the larger Environmentally Friendly Drilling Program Technology Integration Program (EFD-TIP), a project coordinated by the Environmentally Friendly Drilling Systems Program at the Houston Advanced Research Center¹ and funded by the US Department of Energy Research Partnership to Secure Energy for America (RPSEA) Program.²

Background

Over the past decade, technological developments in drilling practices (directional drilling and hydraulic fracturing) have contributed to a boom in oil and natural gas production in the United States. This has been accompanied by growing public debates over the possible positive and negative effects of rapid energy development on local residents, and public opposition to hydraulic fracturing has become a serious problem for the industry in many places. The social, economic, and environmental outcomes can vary widely across different gas and oil plays depending on geological characteristics, the production practices employed by local industry actors, and local social and economic characteristics. Public support or opposition is shaped not only by the existence of positive or negative impacts but also by the extent and nature of interactions between industry and local community members.

The Eagle Ford Shale play in South Texas has become a significant source of oil and gas exploration and development. The larger EFD-TIP project is seeking to implement innovative new production and management practices to minimize the local environmental footprint of energy development and to demonstrate the feasibility of new technologies.

One new technology being evaluated is a ‘communications toolkit’ that is designed to better identify and address local community concerns related to energy development. Our team is tasked with developing this toolkit. This white paper presents results from a set of focus groups with different groups of local community members to better understand their experiences during the recent boom in activity, and their interactions with local representatives of the oil and gas industry. Results can be used to help industry actors better understand and prioritize ways to respond to local concerns about the recent energy boom.

¹ For more details see <http://www.efdsystems.org>

² See <http://www.rpsea.org>

The objectives of this report are to:

- 1. Document the experiences of community residents with the recent drilling activity.**
- 2. Document community residents' perceptions about the quality of their interactions with industry.**

Methods

The data used for this report come from eight focus group interviews in two of the most active oil and gas producing counties in the Eagle Ford Shale play. These counties were also purposefully selected to represent different geographical regions of the Eagle Ford Shale play. La Salle County was selected from the western end of the play; Karnes County was selected from the eastern end of the play.

Three distinct groups of local residents were identified for our focus groups: landowners, senior citizens, and service sector workers. These three groups were identified by key informants in an earlier phase of this research as being particularly impacted by the oil and gas activity in this region (Potterf et al. 2014). We relied on local leaders to help identify and invite individuals in each of the focus groups.

The focus groups were conducted in February 2014. They lasted an average of 90 minutes and were conducted in restaurants over breakfast, lunch, or dinner. A total of 20 senior residents (age 65 and older), 19 service sector employees, and 15 landowners were interviewed (for a total of 46 residents) in the eight focus groups. Each focus group was presented with a set of questions (see Appendix) that elicited their experiences and perspectives on several topics: (a) how recent oil and gas activity has impacted their community, (b) how much opportunity they had to share concerns with elected officials, and (c) whether and how much interaction and communication they had with representatives of local oil and gas development companies. The focus groups were facilitated by two of the lead investigators (Petrzelka and Ellis). The facilitators' role was to encourage discussion among the participants to share and compare their personal experiences and perspectives on each topic. All focus groups were recorded and transcribed, and these transcriptions form the basis for the analysis in this report.

Summary Conclusions and Recommendations

Participants in the eight focus groups related experiences with a wide range of positive and negative economic, social, and environmental impacts on their households and communities. Respondents also suggested that communication and interactions between/among the public, community leaders, and industry actors have been inconsistent and sometimes problematic and contentious. Taken as a whole, the results point to a number of areas where improved communication and changed industry practices may be mutually beneficial for energy companies and local communities.

Conclusions

1. Energy development has affected landowners, seniors, and service sector workers in many ways.

Economic Effects

Not surprisingly, focus group respondents all recognized oil and gas exploration and development activity as an important source of jobs and local economic activity. In respondents' experience, the activity is helping revitalize a stagnant economy by providing opportunities for people who want to work. Focus group participants also noted how energy development has brought about significant increases to the cost of living (rent, housing, and prices in general). These changes have caused some stress for most residents but particularly affected renters, those with lower-paying jobs, and seniors. In the view of many residents, new jobs have made an important impact on the local economy, but not everyone has been able to benefit from new opportunities, and some have been forced to leave or accept a reduction in their economic well-being.

Social Effects

One of the most commonly cited concerns is increased truck traffic, which is seen as degrading local roads and creating unsafe conditions, particularly for seniors. Most focus group respondents also expressed concerns over a perceived 'loss of community' or sense of place, which they attributed to the rapid influx of workers from outside the area and increased traffic.

Health and Environmental Effects

Respondents reported a variety of concerns related to perceived public health and environmental risks from oil and gas development. These concerns were based both on personal experiences as well as information residents have obtained from social networks. A major concern was related to air quality, in terms of releases of hydrogen sulfide (H₂S) and worries about increased dust and an increased prevalence of allergies. Others shared concerns about impacts of energy development on water quality and trash along roads.

2. Local residents are frustrated by the lack of, and quality of, information and communication they get from the oil and gas industry.

Many of our focus group participants were unsatisfied with the quality and transparency of information provided to them by energy companies. Respondents cited numerous examples of unsatisfying interactions or failures to communicate between energy companies and local residents. There is also concern that public officials – the individuals who focus group participants viewed as key intermediaries between the public and industry – are not being transparent with local residents. Finally, many focus group participants shared a view that state regulations on energy development are not adequate and are often not enforced.

Recommendations

A. Increased communication efforts to address local resident concerns about energy development could help minimize local opposition.

The overwhelming majority of participants appreciated the many economic benefits associated with the recent expansion of oil and gas exploration and extraction in the region. They also recognized and accepted that there inevitably will be some problems associated with energy development. At the same time, participants identified a range of social, economic, and environmental impacts that they believed could be addressed without sacrificing the economic benefits. Concerns about a lack of open and transparent communication between the industry and the public have served to make local residents (particularly those who do not directly benefit economically) less supportive of the recent energy boom.

B. Focus groups provide a useful mechanism to gather information about the perspectives, experiences, and concerns of local residents related to oil and gas development.

Our focus groups provided detailed information about specific areas of friction and concern among residents in these two Eagle Ford communities. They also gave residents an opportunity to express frustration with a perceived lack of opportunities for them to express concerns with local elected leaders and industry representatives.

The results suggest that focus groups with landowners, service sector workers, and seniors could be a useful tool that industry could use to learn about the breadth of local experiences and perspectives related to the benefits and costs associated with oil and gas development. They can also be a means to engage in two-way conversations between the industry and members of the public in host communities.

C. The focus group results helped identify specific initiatives that could guide industry responses to local concerns.

Feedback from focus group participants provided suggestions that could guide longer-term efforts to develop innovative programs or technical solutions that minimize undesired impacts and maximize the local benefits associated with energy development. These included:

- Technical, engineering, and management best practices that could reduce the incidence of potential impacts on public health and environmental quality. These practices serve as the core focus of the EFD-TIP project, of which this report is a part. Efforts to deploy best practices that address specific community concerns are likely to yield immediate communications benefits to industry actors and public officials.
- Community development investments designed to mitigate the social and economic side-effects of rapid growth and development associated with the energy boom. These include efforts to reduce traffic problems and mitigate impacts on local housing markets. Such investments are not often considered a normal role for an energy company but might go a long ways towards reducing public concern, political resistance, and regulatory delays.
- Enforcement of regulations that already exist or creation of new regulations that ensure protection of local communities.

D. The focus group results highlighted past failures to communicate effectively but identified several concrete strategies that could improve communication in the future.

Efforts to improve communication between industry actors and/or public officials and local residents can help identify and address problems early on and reduce negative impacts in local communities. These efforts can also identify opportunities where innovative technologies, services, practices, and methods might be adopted to reduce negative economic, social and environmental impacts. The study results point to an opportunity for industry and public officials to view communication efforts as part of a comprehensive ‘best practices toolkit.’ While the deployment of technical solutions to reduce environmental footprints, address traffic conflicts, or minimize impacts on local housing options are appropriate and necessary, it is also important to see ongoing communications with communities as a complementary way to maximize benefits, minimize negative impacts, and improve public acceptability of energy development.

This research suggests some general lessons or practices that would appear to offer potential in building effective two-way communication between energy companies, public officials, and local residents:

- Individual companies or groups of companies could create staff positions to establish and maintain long-term relationships with diverse types of residents. Placing an industry representative on the ground to attend community meetings increases flow of information to industry about how their activities are impacting communities and makes it easier for residents to contact the right industry actors to address emerging concerns.
- Industry could proactively seek information from communities about emerging concerns through individual consultations with focus groups (such as landowners, seniors, and service sector workers) that represent different interests in the community.

- Communication efforts can target the general public. Advertise public meetings with fliers posted in public spaces (e.g., grocery store, restaurants, spaces known locally as those where information is posted, etc.), through the local newspapers, in Extension newsletters, etc.
- Unbiased, research-based information should be provided to residents to address specific concerns that emerge in discussions with communities. To be effective, this information should come from individuals and groups that are seen as independent of the industry and that have credibility with the general public. If information specific to the local situation is unavailable, acknowledge to residents that industry does not have the information.
- Industry should engage in communication efforts at the first stages of oil and gas development activities to help identify and address problems early on and reduce negative impacts in local communities.
- Industry should identify opportunities for the use of new and existing technologies, services, practices, and methods. Use community interactions to identify areas where additional voluntary investments to mitigate emerging economic, social, and environmental impacts would make a major difference in the level of social and political support for energy development.

We hope this report helps advance the broader goals of the overall EFD-TIP project. Recognizing and proactively addressing the concerns of residents should serve to reduce or avoid public conflict and potential legal delays in permitting new wells. By understanding and addressing public (mis)perceptions, particularly by improving two-way communication between industry and host communities, industry actors are likely to realize more quickly the full potential of the domestic shale oil and gas resources in the Eagle Ford region.

Introduction

Over the past decade, the United States has been undergoing a boom in oil and natural gas exploration and production. This rapid growth has been accompanied by increasing public debates over the perceived positive and negative impacts on local host communities.

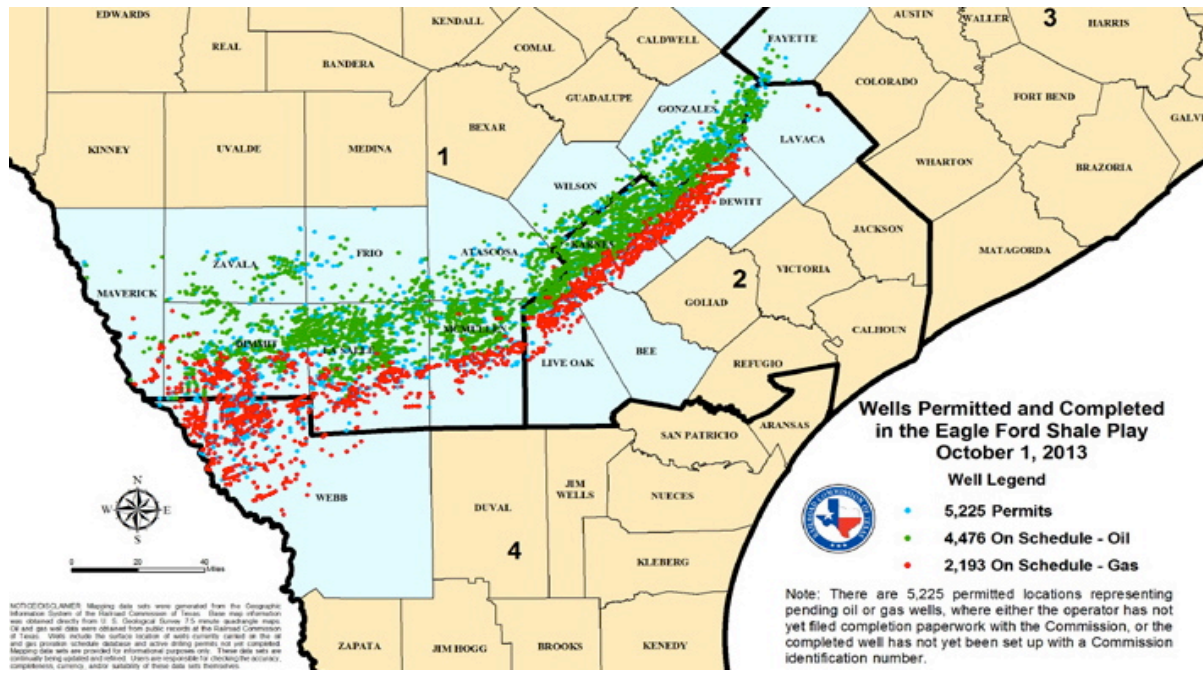
Positive impacts of the boom in domestic oil and gas production at the local level include: employment, investment and economic growth, and increased personal incomes through leasing payments and production royalties.³ Reported negative impacts tend to focus on local production areas and include: impacts of a rapid influx of workers on local housing availability and costs; disruption of local culture and social networks, and a related increase in crime and criminal activity; and dislocation of local residents (Cortese and Jones 1977; Smith, Krannich and Hunter 2001). Local community leaders often express worries about impacts on public services and infrastructure, including growing demands on schools, social service agencies, emergency and law enforcement services, and wear and tear on public roadways. Other perceived negative impacts relate to environmental quality and public health and include concerns about air or water pollution, traffic and safety, and wildlife habitat (Braiser et. al. 2011; Wynveen 2011).

The net benefits from energy development are affected by the level of communication and trust between industry actors, public officials and residents. When information channels are present and communication is open and honest, communities are better able to share their concerns and industry is better able to identify and mitigate emerging problems before they become a significant source of local opposition. When industry is unaware of the nature and severity of local community impacts, they find themselves in situations where (1) industry is unable to respond and (2) levels of mistrust and anger by community members toward industry can quickly build.

The Eagle Ford Shale play in South Texas has become a significant source of oil and gas exploration and development. Eagle Ford Shale is located in South Texas and ranges from the Mexican border near Laredo on the western edge to Gonzales and Lavaca counties on the eastern edge (Figure 1). Within the Eagle Ford Shale play, different regions produce natural gas, condensates, and oil. This allows producers to focus on areas that are producing the most economically valuable minerals at any given time. The northern arc produces primarily oil, while the southern arc produces mainly dry gas. Wet gas condensates are produced in the middle arc.

³ American Petroleum Institute website; www.api.org

Figure 1: Location of wells and counties in the Eagle Ford Shale play.



The research summarized here is a part of the larger Environmentally Friendly Drilling Systems Program Technology Integration Program (EFD-TIP), a project coordinated by the Environmentally Friendly Drilling Systems Program at Houston Advanced Research Center⁴ and funded by the US Department of Energy Research Partnership to Secure Energy for America (RPSEA) Program.⁵ The larger EFD-TIP project is seeking to deploy innovative new production and management practices to minimize the local environmental footprint of energy development and to demonstrate the feasibility of new technologies.

One new technology being evaluated is a ‘communications toolkit’ that is designed to better identify and address local community concerns related to energy development. Our team is tasked with developing this toolkit.

⁴ For more details see <http://www.efdsystems.org>

⁵ See <http://www.rpsea.org>

The specific objectives of this part of the EFD-TIP project are:

1. To empirically examine individuals' perception of the energy industry and their interest, knowledge, attitudes, experience, current behaviors, and behavioral intentions with respect to energy exploration and production issues in the Eagle Ford Shale.
2. To enhance two-way communication between industry and community leaders and residents by developing, testing, and refining a communications toolkit/handbook in the Eagle Ford Shale.
3. To ensure that the EFD Technology Integration Program expertise and information about best practices is readily available in energy-development communities and tailored to locally determined concerns.
4. To develop a synthesized report on energy development regulations and ordinances across the states with oil and gas production.
5. To establish dialog and increase levels of mutual understanding among representatives of the oil and gas industry, regulatory agency personnel, non-governmental organization representatives, and members of the general public with respect to the social, economic, and environmental effects of rapid energy development.

This report begins to address objective number one by documenting the perceptions and concerns of community residents related to oil and gas development in the Eagle Ford Shale region of Texas.

Methods

The data used for this white paper come from eight focus groups in two of the most active oil and gas producing counties in the Eagle Ford Shale play (Figure 1). These counties were purposefully selected to represent different geographical regions of the Eagle Ford Shale play. La Salle County was selected from the western end of the play; Karnes County was selected from the eastern end of the play.

During the initial round of interviews conducted with community leaders in the fall of 2013, three types of local residents were identified as being differently affected by the energy development: landowners, seniors, and service sector employees. The focus groups were organized to allow each of these groups to provide in-depth feedback about their experiences and perspectives.

Focus group participants were selected and invited by local community leaders in coordination with the researchers. The focus group interviews were conducted in February 2014. A total of 20 senior residents (age 65 and older), 19 service sector employees, and 15 landowners were interviewed. The interviews lasted an average length of 90 minutes and were conducted in restaurants over breakfast, lunch, or dinner. The interviews were recorded and transcribed verbatim, producing over 300 pages of data. A semi-structured format was used, using interview instruments (see Appendix) but allowing participants to direct the conversation to

topics of the most importance to them. Interviewers asked probing follow-up questions to elicit more information on subjects brought up by participants.

The transcripts were first coded into dominant themes (Aronson, 1994), and the first two authors coded each transcript a minimum of three times to ensure intra- and inter-coder reliability. The first reading uncovered commonalities in order to group categories together and allowed for the development of dominant themes (Duerden and Witt, 2010).

Rather than attempt to analyze each respondent in each focus group as an individual unit of analysis, the focus group was considered the unit of analysis. To establish breadth and depth of a particular theme, we examined the volume of conversation given to each particular theme. This was determined by the number of times a theme was discussed in a particular focus group. While this method of analysis does not allow for documenting the views of which focus group members did or did not contribute to a theme, the dominant themes presented in this report are those which were consistently presented by community residents.

Due to our non-probability sampling, the views expressed here are not reflective of a statistically representative sample of residents in the Eagle Ford region. However, the consistency of respondents' answers suggests that our findings reflect a reasonably accurate representation of the perspectives held by those residents who are either landowners, seniors, or in the service sector. In addition, they represent a window into the perceptions and concerns of the broader community of local residents as they relate to oil and gas development in the Eagle Ford Shale region of Texas, and their experiences communicating with local industry representatives.

Findings

Perceptions and Concerns of Focus Group Respondents

While most respondents noted a range of positive impacts associated with the recent energy boom, the overall tone of the interviews was more negative than positive, with many participants raising concerns over economic, social, and health impacts and expressing frustration regarding their interactions with the industry. Selected quotes from the full interviews are provided below to represent illustrate the substance of these themes.

The focus groups typically began with two neutral and open-ended questions: "How has oil and gas drilling impacted your life?" followed by "What are the ways oil and gas activity has impacted the community?" In response, participants in all of the focus groups talked about a wide range of economic, social, and environment/health issues. While there were some slight variances among the groups (noted shortly), Table 1 contains the dominant types of impacts which emerged in the majority of the interviews.

Table 1. Top three types of impacts raised in the focus groups (N=8)

Economic Issues (n=8, 100%)

- Jobs
- Increased prices
- Increased housing costs

Social Issues (n=6, 75%)

- Traffic
- Social Disruption

Environmental and Health Issues (n=7, 88%)

- Air Quality
 - Water Quality
 - Trash
-

Economic Issues

Jobs

In all of the focus groups, residents expressed appreciation for the positive impacts of local job opportunities. Benefits for workers are seen to have extended beyond the oil and gas sector and, as a result, most people in the community are now perceived to have increased employment opportunities.

The positive effect of having the opportunity for good paying jobs available locally is seen in the following quotes:

Well I think more people, more local people are employed. You had to leave Cotulla to find a job unless you worked in the prison or you worked in the school system.

-La Salle County, Senior's Focus Group

If you want to work, if you want to work there are jobs out there for men and women both. There's a lot of jobs, you can see the signs outside, they are hiring for whatever you want.

-Karnes County, Senior's Focus Group

Everybody's working that wants, if you want a job- It's here...if you want a job there is no reason for you not to work. No reason whatsoever, I don't care what field you're in. Yeah the unemployment, I think it's what, lower than six percent now and it was twelve, thirteen, just not too long ago, so, it's definitely, I mean, the jobs are there.

-Karnes County, Service Sector Focus Group

Probably some of the good things are the jobs, you know there, if you want a job and you want to work, you can find one.

-Karnes County, Landowner Focus Group

Increased prices

Respondents shared concerns about undesired economic impacts, particularly the increase in prices of goods and services and increased housing costs. These issues were raised primarily by those residents in seniors and service sector focus groups and are illustrated by the following quotes:

...they're letting these businesses come in but instead of lowering their prices they're shooting the prices up.... tripling the prices! On everything, you know.

-La Salle County, Senior's Focus Group

It has just really hurt a lot of people that are in that lower income bracket that don't get all of the assistance and stuff like that, because we do get housing but like I said, I don't get food stamps. I have to drive for my kids every day. You know, for them to eat or you know, whatever. And it's just, it's gotten hard, it's gotten, cuz even yeah, milk has gone up like twenty or twenty-five cents a gallon since everything else has started and the gas is just ridiculous.

-Karnes County, Service Sector Focus Group

I think it probably impacts people that are on the set income like on social security rather than the people who are working, because they don't care, they're making, you know, twenty, thirty dollars an hour, so, the groceries go up five cents they probably don't even notice it. It's the ones who are on a fixed income that notice it.

-Karnes County, Senior's Focus Group

[Interviewer]: What has, or how has the oil field development changed your lives?

[Respondent 1]: I can say it all myself, the food prices has went up a lot...Everything has went up.

[Interviewer]: So not just food?

[Respondent 1]: Everything, the utilities, the price of the gas...

-Karnes County, Service Sector Focus Group

Here, everything, what we used to pay, twenty cents, now we pay eighty-eight cents. Uh, uh, they, groceries went real high, meals are very high.

-La Salle County, Senior's Focus Group

Increased Housing Costs

On top of increased cost of groceries and gas, increased housing costs are also having a detrimental impact on some locals, particularly those on fixed incomes or who rent their homes. These impacts were again noted primarily by seniors and service sector focus groups, illustrated by the following representative quotes:

What happened, you know, those companies they come, and they buy, you know, up places, and they pay whatever the price they want, you know, we can't afford it, so there we are with, we can't even buy nothing. Yes. Well it's not just affecting the, the older people, the older generation, the young kids, I mean, I don't see how they can afford it, I mean, they're starting families and stuff like that and it's just like, you know, if they were to buy a house... It's like California. Yeah, it's, yeah. Yeah, they Californicated Kenedy.

-Karnes County, Senior's Focus Group

The locals are left out in the cold because they have, I mean there is just no place to put somebody on a little fixed income anymore. You have to have the big bucks just to get in to any little teeny tiny house, so people are having to move in together, people having to move away, it's awful.

-Karnes County, Service Sector Focus Group

Well you know and what happened also when all this stuff started, I mean, our local people were run off their, their, their rental properties, the people that rented, they were kicked out to rent to the oil people which they could rent at a hundred and fifty dollars apiece, you know? And they were making a killing at a thousand dollars a week because they would put twin beds in one bedroom and if they had three bedrooms that was six people plus they even used the living room to put more beds so they were making a thousand to 1200 dollars a week but they would kick out the local people.

-La Salle County, Senior's Focus Group

Rent here has gotten ridiculously crazy. I mean, you don't find anything under a thousand dollars, even if it's a dilapidated house that's falling down, they're gonna charge you a thousand dollars for it, and so myself I can't afford that and I have three kids.

-Karnes County, Service Sector Focus Group

Social Issues

Social Issues were another primary theme in the focus groups and mostly focused on the many concerns regarding traffic as well as perceived loss of community.

Traffic

Comments pertaining to traffic and road safety issues were expressed in all focus groups and, along with trash (discussed shortly), was the number one issue for landowners. Specific concerns expressed by focus groups included increased truck traffic, hazardous driving by oil field workers, and motor vehicle accidents.

The following focus group respondents express concern over increased traffic in general:

They [seniors] don't come out because they're afraid of traffic. There have been too many accidents.

-La Salle County, Senior's Focus Group

Ten years ago, I could work on highway ninety seven all day long and maybe see one or two vehicles go by, now it's constant, you know, it never stops, day, night, it never stops. You know, like oil transports and vacuum trucks and, mostly them and then some, you know, oil field gain trucks and service company trucks and pickups and, it's real busy.

-La Salle County, Landowner Focus Group

At five o'clock I would leave, just hop on ninety seven and go home, no problem. Now I may sit there ten minutes waiting on all the traffic because it's five o'clock you know, and then it's constant traffic. I used to worry about having a flat and having to change it myself. Now I'm worried about having a flat and getting run over, you know.

-La Salle County, Landowner Focus Group

The traffic is ridiculous. My mom lives on seventy-two east and she lives right at the point where truck route meets seventy-two and it will literally take her forty-five minutes to get out of her driveway in the morning. Like, she's already on the point where she's ready to sell her house cuz the traffic is just horrible. Getting in and out is hard to just move around.

-Karnes County, Service Sector Focus Group

You know, I feel sorry for the senior citizens. The traffic is so bad, it's like interstate ten out here. And some of them are afraid to get on the highway, you know, I have a neighbor, she's terrified. I have to drive her everywhere.

-Karnes County, Service Sector Focus Group

While focus group participants are concerned with traffic in general, they specifically pinpoint issues with oil field workers' driving:

The amount of deaths from accidents, there have been a couple of articles in the paper that, you know, went from, from almost no accidental deaths from car wrecks, you know maybe one every couple of years or whatever to, phew, just skyrocketed. Whole bunch. Yes. Yeah, all they say is that they uh, the driver was over tired because he just finished working twenty hours or something, you know, and uh, I mean, greed can only go so far.

-Karnes County, Senior's Focus Group

And you've gotta watch for them [18 wheelers] on the county roads, we got tankers going down that county road, they got narrow culverts and they don't know what those there culverts are, you better stop and wait for them...

-Karnes County, Landowner Focus Group

On Penny Road everyone complains that the trucks, the company trucks were going fifty, sixty miles an hour, so they put up signs [saying] twenty miles an hour. They don't mind them.

-La Salle County, Senior's Focus Group

Loss of community/place

The increase in traffic and population has many of the residents in all three groups feeling a sense of loss of community.

And you hear, you hear a lot from just people in general complaining about, you know, different things happening that this would have never happened here before. You know, stuff like that [crime], so it's, it's an adjustment period for us being a small quiet hometown to this.

-La Salle County, Landowner Focus Group

I mean I don't know who lives in the next house or who just is driving by, to me I just, I don't like it. Personally myself. I think it has ruined a lot of the little town-ness. You know? Of being here.

-Karnes County, Service Sector Focus Group

I just don't know who the next person is. And the small town, I grew up here in Kenedy, I've lived in Karnes City. I could still tell you half the people that live in Karnes City and they still live in the same spot or, you know, but then you have all these new men, new people, you know, that you don't know, and I mean they may feel the same way because they're having to move into a whole new environment, but, with me, I just, you don't know, you know? I mean, all of them aren't sweet and innocent, you know, and I wouldn't, I would never put my child in that.

-Karnes County, Service Sector Focus Group

It was, it was a big change, and it's very congested everywhere you go. And it's a small, small small town and ... It used to be a really nice town.

-La Salle County, Senior's Focus Group

Environmental and Health Issues

A third common theme that emerged from the majority of focus groups were concerns about the impacts of oil and gas development on public health and environmental quality. Respondents mentioned a variety of specific environmental and health concerns. These concerns were raised most often by those residents in seniors and service sector focus groups.

The main concern in the interviews related to the safety of local air quality associated with flaring that releases hydrogen sulfide (H₂S) into the air and the increased prevalence of dust in the air. Additionally, comments were made pertaining to concerns about water quality and trash.

Air Quality

Half of the focus groups mentioned concern about what they believe to be H₂S leaks that have occurred:

So you know, and I want to know what are they going to do to monitor our air control because if you're here at night you see all those flames, of course they say, "That doesn't do any, any harm, because it's, you know, flushing out the bad gasses or whatever," Well, I don't care what they say, it's still up in this, in the atmosphere. So it's still here!

-La Salle County, Senior's Focus Group

In referencing a daughter coming to visit and commenting on the smell in the air, this respondent stated:

"Mom, as soon as we open the doors to our vehicle we could smell gas." I go, "I don't smell anything" and my grandkids, "Grandma..." You're used to it. Yeah cuz we're already used to it. "You can smell fumes Grandma. You don't smell them?" I said, "Just at the beginning but I don't smell no more so I guess we're safe." "No Grandma, you're not because we smell it. We smell it."

-La Salle County, Senior's Focus Group

Why do they have to have that much burning? Those big old fires! It's what the H₂S in it, it's, it's just the... Hydrogen Sulfide, Hydrogen Sulfide. You'd smell it otherwise. Yes, well we still smell it. Well when you come into, from coming from Karnes City into Kenedy, somewhere midway in there like where uh, close to the hospital, you can smell that....around there it's bad sometimes, um... Fortunately we have this constant, uh, light wind in this area, otherwise we'd probably have a real heavy plume of bad smells.

-Karnes County, Senior's Focus Group

Other focus group respondents discussed air quality as it relates to issues with dust and increase in allergies:

“What about health?” I’ve been like this since September, my voice. So it has to do with allergies. And there’s a lot of stuff up in the air which we didn’t have before.

-La Salle County, Senior’s Focus Group

I was talking to somebody, they said her husband had gone to the Doctor and he had allergies and that his Doctor told him that in a few years, everyone in our, just about everyone in our community is going to have this problem. The allergies. Cuz he was real sick; I can’t remember who it was, about two weeks ago and, the Doctor had told him that in a few years, a lot of people would have this because of all of this, because all those flames out there, they’re gonna cause these problems.

-La Salle County, Senior’s Focus Group

When you come in to Cotulla, it looks like Cotulla’s got a dust bowl over the top of it, you know. It ends up sometimes, you can come in from San Anton and look and sometimes it’s an orange cloud.

-La Salle County, Landowners Focus Group

One thing that occurs to me listening to those two stories is how long before all those pollutants are going to pollute the entire city so that we are all bringing this in and all having the allergies and all having the rashes. I mean it’s in the air, and the more trucks that come in, the more it’s just going in there, it doesn’t stay secluded where they put, where they plant some, you know, where they put the oil well, that, all that diesel fuel and everything else is permeating the entire environment.

-Karnes County, Senior’s Focus Group

You know what else is bad is this dust. It’s messing with everybody’s allergies. Let alone the cars, but that dust is so bad.

-Karnes County, Service Sector Focus Group

Water Quality

In addition to air quality, water quality was also mentioned in half of the focus groups, often linked to the unknown aspect of what was happening to the water, particularly in terms of contamination. Several people expressed concerns over water quality, as exemplified in the following quotes:

I have concerns over the water. The water, because the quality of our water, um, you know that last year, it was during testing time, the kids had water, you know how they give for the snack a little thing of water, the ozarka water, so they had their little bottles of water, and then one of the students said, he said, “Miss, can I go get some water,” so they went and got water from the water fountain. And he says, “Look Miss, look at the

color!" Brown. It was discolored. And he says, "I'm not going to drink it!" So we compared it to what we have, and it was an ugly brownish looking type color. So, what is happening to our water?

-La Salle County, Senior's Focus Group

I read and I watch the news and hear about all these other places that have had uh, the fracking going on and you know, those people have already been through it, we're just kind of starting out, but they've already done it and they say that there's hazard in the water, but nobody will believe that, I mean, you know they'll disprove that. Well we can taste it.

-Karnes County, Service Sector Focus Group

And to me it tastes funny...It's just not like the water that was before.

-Karnes County, Landowner Focus Group

I know that's my major concern is, is I don't want my water contaminated and somebody can say until the cows come home that they're not contaminating our water, and like [name] said, when it's contaminated it's too late. Extremely hard to clean up.

-Karnes County, Landowner Focus Group

Trash

In addition to air and water quality, trash was also mentioned as a main concern, expressed primarily by the landowner focus group members. Several respondents expressed a strong dislike for the increased prevalence of trash in the community:

[Respondent A]: We're constantly picking up trash. It's horrible out that way; it's just trash everywhere

[Respondent B]: It's every, it everyday there's, especially these plastic grocery bags, millions of them you see

[Respondent A]: You see, the oil field don't realize that cows will eat those and it will kill them, so you know, we're constantly out there, picking

[Respondent B]: It could kill them.

-La Salle County, Landowner Focus Group

The first really bad session of trash came in when they started doing the pipelines cuz they [workers] all came in, they get their, their trucks, they go into town, they'd eat, get whatever, get their ice bags, drive back out, all the ice bags would fly out everywhere, of course, so they mow over them, but that was the first big scene, we thought, "Oh my gosh," but it was everybody in the heat of the day doing that work and everything, it held the ice, and that made it really bad with all those ice bags out there. Then all their food trash started getting out, they get more and more and more. So it just increased. In fact the head of the chamber a few years ago, he got so mad he wrote a letter to everybody up top, you know, all the Congress here, there everywhere, state whatever,

and he writes this letter and sent it to everybody and we got a lot of action. They cleaned it up once.

-La Salle County, Landowners Focus Group

[On my land] the trash is just horrible and some of the companies would have their workers when they weren't busy, picking up trash, but I don't seem to see it much anymore.

-Karnes County, Landowner Focus Group

If, if you're a landowner on a major road it's a weekly chore to go pick up trash out in the field that's blown across the fence, and just... It's even, it's even on county roads.

-Karnes County, Landowner Focus Group

Summary

Many of the concerns expressed above have been expressed in other regions experiencing oil and gas development. However, because these concerns relate to the specific experiences and perceptions of drilling activity in the Eagle Ford among residents, they provide an important backdrop for understanding residents' perceptions of their relationships with industry and industry officials. In the next section we summarize ways in which good and bad communication practices have affected the ways residents feel about the recent energy boom in this region.

Relationships with Industry

The second objective of this report is to document residents' perceptions of their communications and relationships with local representatives of the oil and gas industry. Understanding these relationships is vital to identify opportunities for improved communication between communities and industry, which should be helpful in addressing or mitigating some of the concerns detailed above.

We begin by detailing residents' perspectives on interaction and communication with industry, then turn to interaction and communication with public officials, and finally discuss views residents have of regulations – the top three themes which emerged in focus group discussions regarding communication.

Interaction and Communication with Industry

In over half of the focus groups, respondents identified communication between industry representatives and the local community as an important issue. The majority of focus group participants found communication by industry to be unsatisfactory, feeling like they have received very little to no advance notice about what to expect. Discussions in more than half of the focus groups also pointed to experiences that suggested the industry 'did not care' about the impacts their activities were having on local residents.

During each focus group, participants were asked about their experiences when industry first came into their community. Specifically, we inquired if they were ever given an opportunity to talk with industry representatives about what to anticipate with the drilling activity and to address any community concerns. As noted by the following quotes, focus group respondents feel they did not have sufficient opportunities to engage in communication with industry representatives:

I told my husband, you know, when we talk about this, why didn't they have some type of meeting or something, say, hey, a town meeting or something and say, "This and this and this is going to happen, how does the community feel about this."

-La Salle County, Senior's Focus Group

Um, they [industry] came in and, of course there's no zoning out in the rural areas, they just buy land and start, they don't ask or nothing to build a facility, and I know it's happened to a lot of other people, there's been a lot of places and they put it where they're convenient and they worry about the consequences later. Yeah, we had no idea this was happening, we never saw any paperwork on it or anything, so one of the communication problems I feel is they need to notify people in that direct area, it's gonna be in, you know, impacted. They [industry] changed their [residents] lives forever, but...

-Karnes County, Senior's Focus Group

[Interviewer]: So when it started were there any public meetings either by city officials or by industry saying, "This is what you can expect?"

[Respondent]: There's just been some recently, um, I know a couple of the, the oil companies have you know, had these little [public] meetings, um, but it was already two or three years after, after the fact. You know, so... not that I was aware of...

-Karnes County, Service Sector Focus Group

For more than half of the focus groups, participants also shared experiences that had convinced them that the industry doesn't care about community impacts, as illustrated in the following quotes:

[Interviewer]: If you had a chance to talk with industry with the oil companies, and convey your main concern or concerns, what would you tell them?

[Respondent]: I don't think they would care.

[Interviewer]: Okay.

[Respondent]: They won't listen to us. They want to do what they're going to do. They're going to do what they're going to do...

-Karnes County, Senior's Focus Group

It's only as risky as who's running it, and who's running it are people that are not being watched, or people that are being, uh...careless. Careless and it is overlooked and they run [the workers] to death, they're exhausted and nobody cares, and so it's only as risky

as the people that are running it and the people that are running it are exhausted and rich because they're getting paid a lot of money.

-Karnes County, Service Sector Focus Group

My oil field companies are not very timely about getting back to me when I express a concern, and so they probably think I'm the witch from heck, but I just keep calling them, you know, if I have to call them two times, three times a day, two times a week, three times a week. You get a hotline, you get a recording, I hate those recordings. And, uh, they still don't have an answer, so I'll just keep bugging them, because that's the only option, you could either have to forget it or just keep bugging them.

-Karnes County, Landowner Focus Group

Interaction and Communication with Public Officials

Rather than direct communication with oil and gas industry employees, a more common avenue for communication may be through local public officials. Similar to communication with industry, most focus group respondents found communication with their public officials to be frustrating. Respondents related stories that suggested public officials were not forthright with pertinent information and were either incompetent or uncaring. A typical example is the following quotes:

[Interviewer]: How many of you have problems and gone to elected officials?

[Respondent]: Well we don't have elected officials that you can go to right now.

[Interviewer]: So are you, are you saying that your elected officials aren't there or that they're not competent, or not...

[Respondent]: They're not competent. They're not competent, they're not there, they're not readily available...I haven't gone for oil field business to commissioners court but I have with several other issues and here I am five or six years down the line, and never got anywhere. That's pretty much what the commissioner's court does. Yeah, they, they let you speak and then they deep six it.

-Karnes County, Landowner Focus Group

[Interviewer]: So, so, it sounds like several of you have concerns about the water and who do you talk about this with?

[Respondent]: You can't, you can't really talk to any of the officials around here because they're just not trustworthy.

-Karnes County, Service Sector Focus Group

[Interviewer]: Do you talk with city officials about your concerns?

[Respondent]: I don't. I've never gone over there. Well we go to church with one of them, one of the persons who's uh, on the Planning commission. We air our concerns that way with him. I'm not sure it gets back because, sometimes it's just a rant, you know... And it's the old adage, money talks. We talk about all this among all of us, you know, when we get together but I guess we just don't go to where we're supposed to really go and complain and sometimes if you go complain I think they won't do anything about it.

-Karnes County, Senior's Focus Group

[Interviewer]: So when you have these, these concerns and these, these issues, do you express them to the elected officials or...

[Respondent]: They won't listen. No they won't listen, the only time they worry, this, this is my, my point of view of things. The only time they worry is when their election is coming, they are after you. And here, they, they get like little groups, it's a small town, to form for him to vote for him, and they don't do nothing. They don't do anything. They don't do anything.

-La Salle County, Senior's Focus Group

These quotes highlight how industry actors who rely on public officials to be a conduit to the local residents may find that communication concerns are also found at this level. Frustration about the level and quality of communication among residents and elected officials was relatively common and affects the level and type of information residents are receiving regarding local drilling activity.

Lack of Enforcement of Regulation

Landowners in particular also expressed concerns about a lack of regulation on the oil and gas industry, specifically a lack of effectiveness of the Texas Railroad Commission (<http://www.rrc.state.tx.us>). The Texas Railroad Commission is a state agency that regulates the oil and gas industry, gas utilities, pipeline safety, safety in the liquefied petroleum gas industry, and surface coal and uranium mining. The following quotes illustrate concerns expressed over the enforcement of regulations by the Texas Railroad Commission:

I, just, just what I've heard other people talk about, that they had absolute, it's a waste of their time to even go through the Railroad Commission, it, you know, to them it's a joke or something. I've talked with the Railroad Commission a few times and didn't get anywhere but the, the last time I spoke to them, they actually told me their job is to permit for these activities, but if you want safeguards put in place, the Railroad Commission says that is the job of your County Commissioners and County Judge. That goes nowhere in Karnes County, but they said that actually most counties and cities will have ordinances and stuff to protect the environment in their county whereas Karnes County it just doesn't have any.

-Karnes County, Landowner Focus Group

Free enterprise says you do what you want as long as you don't interfere with your neighbor. The Railroad Commission should be there to make sure that you don't interfere with your neighbor, and that's not what's happening, because the Railroad Commission says it's up to the county Commissioners and the County Judge to pass any ordinances to protect you from your neighbor. And we don't have that. We don't have any ordinances. We don't have a county government that can do it. We have no ordinances at all. Never needed them, you know, just never did need them for anything.

-Karnes County, Landowner Focus Group

The railroad commission ...basically is the one who has overseeing authority on all that and there's just. They're not gonna. They're overwhelmed to be honest with you!

-La Salle County, Landowners Focus Group

[Interviewer]: So how responsive have you found them, the Railroad Commission?

[Respondent]: The Railroad Commission? I might as well have wasted, I wasted my time calling them. Ha ha. They never resolved anything except that I'm in no danger, I just have to put up with whatever is going on. That, that seems to be... The standard ...what everybody seems to say.

-Karnes County, Landowner Focus Group

It seems like the Railroad Commission doesn't apply very much concern towards those issues. You contact, when the Railroad Commission, like the saltwater disposal company, they have to go apply for a permit from the Texas Railroad Commission. If the landowners protest that disposal site then the railroad commission says, okay, we're going to set up a hearing date and the land owner has to hire their attorney. Well, depending on, you know, not every landowner is getting royalty, can you afford that attorney? Can you afford three hundred dollars an hour to go to these meetings in Austin? And then when they go there, the company applying for the saltwater disposal permit simply concedes and the permit is not granted and they reschedule the hearing. So you've wasted your money on the attorney to go there and nothing happens. And that happens repeatedly.

-Karnes County, Landowner Focus Group

Initial Conclusions

This phase of our research was designed to accomplish two goals: (1) to better understand the experiences and concerns of residents in the Eagle Ford Shale play area, and (2) to document the quality and impacts of efforts by industry partners to communicate with residents. We conducted focus groups with landowners, seniors, and service sector workers in two counties where significant oil and gas development has been taking place for the last 5 or more years.

The overwhelming majority of participants in the focus groups recognized that the economic benefits of rapid oil and gas development will inevitably be accompanied by some problems. Focus group participants generally recognized the benefits of more jobs in their communities, but were unsure if the benefits outweighed the costs, both economically and otherwise.

For many respondents, particularly seniors, people living in rental housing, or parents of young children, concerns such as increased traffic, housing costs and prices, and perceived community loss or transformation were difficult for them to deal with, even in the face of more economic prosperity in general for the region.

Focus group participants identified several specific issues where industry efforts to address their concerns can be improved. For example, heavy truck traffic within the boundaries of

towns and cities have heavily affected quality of life of residents, but few companies have taken the initiative to seriously address this concern. Similarly, impacts on local housing markets might be minimized if industry employers made efforts to develop more temporary housing for their workers.

One of the overarching goals of this research project is to improve the communication that occurs between the industry and communities. Social science research has demonstrated that engaging residents in host communities to listen and respond to their concerns can increase trust and reduce anxiety associated with rapid energy development. From the point of view of focus group participants, there remains room for improvement in the level of communication and interaction between community members and industry in the Eagle Ford shale region. Focus group participants cited numerous examples of frustrating interactions and failures to clearly and transparently communicate between energy companies and local communities. From residents' points of view, public officials also have not been effective at relaying information they learn from industry leaders back to the general public.

It is our hope that this report will serve to further the goals of this project. The use of focus group interviews with residents in the communities experiencing oil and gas development provides one option for gathering detailed input about local priorities and concerns. The specific issues and concerns expressed by residents in our focus groups provide a checklist for the industry and research community that could be used to guide the development of innovative solutions that might minimize undesired impacts while maximizing local benefits.

Initial Recommendations

The overwhelming majority of participants recognized that there inevitably will be some problematic issues associated with rapid expansion of oil and gas development and that some of this was an expected cost of the benefits that were being provided to their communities. However, they also felt that more could be done to respond to economic and social dislocations, and to protect local environmental quality and public health. The findings of the study have immediate value for local and regional industry actors and elected officials who want to know more about the specific topics of friction and concern that are on the minds of residents in these four Eagle Ford communities.

The findings provide guidance to longer-term efforts to develop innovative programs or technical solutions that minimize undesired impacts associated with energy development. These could include:

- Efforts to deploy best practices that address documented community concerns are likely to yield immediate communications benefits to industry actors and public officials.
- Community development investments designed to mitigate the social and economic side-effects of rapid growth and development associated with the energy boom. These include efforts to reduce traffic problems and mitigate impacts on local housing

markets. Such investments are not often considered a normal role for an energy company but might go a long ways towards reducing public concern, political resistance, and regulatory delays.

- Enforcement of regulations that already exist or creation of new regulations that ensure protection of local communities.

Efforts to improve communication between industry actors and/or public officials and local residents can help identify and address problems early on and reduce negative impacts in local communities. They can also identify opportunities where innovative technologies, services, practices, and methods might be adopted to reduce negative economic, social, and environmental impacts. The study results point to an opportunity for industry and public officials to view communication efforts as part of a comprehensive 'best practices toolkit.' While the deployment of technical solutions to reduce environmental footprints, address traffic conflicts, or minimize impacts on local housing options are appropriate and necessary, it is also important to see ongoing communications with communities as a complementary way to maximize benefits, minimize negative impacts, and improve public acceptability of energy development projects.

This research suggests some general lessons or practices that would appear to offer potential in building effective two-way communication between energy companies, public officials, and local residents:

- Individual companies or groups of companies could create staff positions to establish and maintain long-term relationships with residents. Placing an industry representative on the ground to attend community meetings increases flows of information to industry about how their activities are affecting communities and makes it easier for residents to make contact with the right industry actors to address emerging concerns.
- Industry could proactively seek information from communities about emerging concerns through individual consultations with focus groups (such as landowners, seniors, and service sector workers) that represent different interests in the community.
- Communication efforts can target the general public. Advertise public meetings with fliers posted in public spaces (e.g., grocery store, restaurants, spaces known locally as those where information is posted, etc.), through the local newspapers, in Extension newsletters, etc.
- Unbiased, research-based information should be provided to residents to address specific concerns that emerge in discussions with communities. To be effective, this information should come from individuals and groups that are seen as independent of the industry and that have credibility with the general public. If information specific to the local situation is unavailable, acknowledge to residents that industry does not have the information.
- Industry should engage in communication efforts at the first stages of oil and gas development activities to help identify and address problems early on and reduce negative impacts in local communities.

- Industry should identify opportunities for the use of new and existing technologies, services, practices, and methods. Use community interactions to identify areas where additional voluntary investments to mitigate emerging economic, social, and environmental impacts would make a major difference in the level of social and political support for energy development.
- Proactive, voluntary efforts by industry to address specific community members' concerns can make a difference in community support for oil and gas development.

We hope this report helps advance the broader goals of the overall EFD-TIP project. Recognizing and proactively addressing the concerns of residents should serve to reduce or avoid public conflict and potential legal delays in permitting new wells. By understanding and addressing public (mis)perceptions, particularly by improving two-way communication between industry and host communities, industry actors are likely to realize more quickly the full potential of the domestic shale oil and gas resources in the Eagle Ford region.

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Appendix

Engagement for Effective Communication: Development and Testing of Best Communication Practices in Eagle Ford Shale Communities

Focus Group Interview Guide

Introduction and Rapport Building

- How has oil and gas drilling impacted your life? (probe for specifics)

Current Impacts on Community

- What are the ways oil and gas activity has impacted the community?
 - Has there been an increase in fatalities?
 - Has the rent gone up? Housing?
 - Increased Crime? Perpetrated by locals or outsiders?
 - Concerns about water quality or quantity? Air quality concerns?
 - What keeps you staying here?
- Are there any good impacts from oil and gas activity?
 - Do you think things will change for better?
- Were there changes happening before oil and gas industry came? How has the community changed as a result of oil and gas activity?
 - What was communication like before activity?
 - Did you feel like you had enough information about what was happening?
 - Where did you get your information?

Communication with city officials or industry

- Do you have opportunity to share concerns with city officials?
 - Who have you worked with to address these concerns? (Use specifics from previous question)
 - Have you sought information or assistance from anyone? (Universities? State agencies? Others?)
 - Have you tried working directly with the oil & gas companies to address these concerns?
 - If yes:
 - Did they understand your concerns?
 - Did they respond to your concerns? If yes, how so (detail)
 - If no:
 - Why not?
 - What have you tried?
- When drilling activity started, were there any public meetings by city officials or industry detailing what the community can expect?
 - Was this helpful or successful?
- When you have an issue who you talk to? Where do you get information from?

Closing Questions

- When did you first hear the term Eagle Ford?
 - What did you think when you heard the term?
- If you could talk to elected officials what would you want them to know?
- Is there anything I haven't asked about that you think I should know?