

## **Appendix A. Primary Data Collection Methodology**

### **Survey**

HIP and HIA Steering Committee coordinated a brief screening survey to facilitate recruitment and selection of focus group participants to discuss the potential benefits, risks and impacts of the proposed Lobos CO<sub>2</sub> pipeline. The survey, which was made available both online and by phone, was advertised for two consecutive weeks via the Mountain View Telegraph, Torrance County's weekly newspaper, as well as via posters in each of the principal towns in Torrance County – Estancia, Moriarty and Mountainair. The survey took an estimated 5 minutes to complete, requested basic demographic questions, and asked two questions related to attitudes and knowledge about the proposed pipeline, and an opt-in question to be contacted if the respondent was interested in participating in focus groups to discuss their perspectives on the proposed pipeline. The survey was open from July 17 to August 1, 2014, and received a total of 60 responses, with nearly half of all respondents indicating interest in participating in focus groups. (See *Survey Results*.)

### **Focus Groups**

HEP, HIP and the HIA Steering Committee conducted two focus groups – designated as focus groups A and B – with Torrance County residents that could potentially be impacted by the proposed pipeline, either directly or indirectly. Focus group A was held on August 20, 2014 and consisted of 11 Torrance County residents at-large. Focus group B took place on August 21, 2014 and consisted of 7 residents of the Manzano Merced, a region of Torrance County located on the eastern slopes of the Manzano Mountains, which is home to numerous land grant families descended from the original Native American and European settlers in the region. PHTC coordinated focus group logistics, including venue, materials and food, while HIP carried out recruitment and facilitated the focus groups with support from HEP.

#### **Purpose**

The focus groups were conducted to answer research questions where either (1) primary data collection was a more adequate or robust method for obtaining meaningful data than via secondary data sources (including municipal, county and state organizations, academic literature and news media) or where (2) significant gaps existed within secondary data sources. Additionally, the findings from focus groups could be used in comparison to findings obtained via secondary sources – either confirming or challenge them – as well as to provide additional details to secondary research findings or to provide a localized context and understanding that would not otherwise be possible.

#### **Sampling**

To sample focus group participants, HIP used a hybrid stratified purposeful and criterion sampling methodology [citation needed] to solicit as broad a range of viewpoints as possible. Initially, HIP planned to hold two focus groups for Torrance County residents at-large, one to include residents that were in favor or comfortable with the proposed pipeline (i.e. felt there would be more benefits than harms) and one to include residents that were highly concerned about the potential adverse impacts of the proposed pipeline (i.e. felt there would be more harms than benefits). HIP also sought to include participants that were knowledgeable about the pipeline and could therefore contribute informed opinions and perspectives in the focus group. To these ends, the screening survey included measures of both attitude about and knowledge of the pipeline. Since the HIA focuses on Torrance County specifically, only Torrance County residents (either full or part time) were considered for the focus groups.

While a small number of survey respondents, 6 in total, expressed comfort with the proposed pipeline, only one indicated a willingness to participate in a focus group. Therefore, the focus group that was initially planned to convene a discussion amongst residents that were comfortable with and/ or in favor of the proposed pipeline was canceled due to low interest, and only one focus group was carried out for Torrance County residents at-large, which included residents who were highly concerned about the potential adverse impacts of the proposed pipeline.

Additionally, a sub-group of Torrance county residents that were not represented among the survey respondents, namely individuals belonging to Manzano Merced land grant families, expressed interest in participating in a focus group. Using a politically important case sampling methodology (in which cases are chosen based on their political or social significance to the matter under study), HIP agreed to hold a focus group with Manzano Merced residents to include this important perspective in the HIA.

For focus group A, including Torrance County residents at-large, interest exceeded capacity. While there were 10 slots for focus group participants, 22 survey respondents met the criteria for recruitment. (See *Survey Results*.) Therefore, each of these 22 respondents was assigned a number via a random number generator and ranked accordingly to create a recruitment list. Respondents were contacted by phone or, if they had not provided a phone number, by email. Three call attempts were made on consecutive business days for each respondent that provided a phone number before moving on to the next-ranked individual on the recruitment list. Likewise, respondents that left only an email were skipped if no reply was received within 3 business days. This process was repeated in batches until 10 participants were confirmed. Note that 1 walk-in participant was accepted the day of the focus group, in addition to the 10 recruited participants, for a total of 11 participants.

Recruitment for focus group B, including Manzano Merced residents was facilitated by members of the Manzano Merced itself in coordination with the HIA Steering Committee, for a total of 7 participants.

#### **Development, Facilitation and Analysis**

HIP developed a semi-structured focus group guide (see *Focus Group Guide*) in collaboration with PHTC and Jacqueline Mills, PhD, an expert on participatory mapping methods in HIA. Due to the spatial and geo-physical nature of the research questions HIP sought to answer during the focus groups, the focus group guide included both discussion and group mapping activities. Prior to data collection, HIP created a preliminary codebook that was informed by theoretical constructs, literature review and community-identified topics that surfaced during a prior community input meeting. For purposes of this research, each “code” represented a sub-topic or category of response to each of the research questions. (See *Codebook*.)

HEP collected detailed notes at each focus group, and HIP created three sets of audio recordings per focus group. These recordings were then transcribed to identify verbatim quotes for the HIA report and in order to carry out detailed analysis on the focus groups and elucidate key themes. HIP carried out qualitative data analysis on the transcripts using the preliminary codebook, iteratively modifying the codebook as new codes emerged inductively or “in vivo” during the analysis process. Two different HIP staff carried out coding simultaneously on each of the focus group transcripts. During coding, data (i.e. portions of the transcript text derived from speech during the focus groups) were grouped into their respective codes, which facilitated the

identification of key themes for inclusion in the report, as well as the extraction of key quotes for embedding in the report to complement the quantitative data and academic literature components of each research questions. These quotes were meant to offer additional context and depth to the key concepts in the report.

### **Survey Results**

A total of 60 unique individuals responded to the screening survey for the focus groups during the time the survey was open, from July 17 to August 1, 2014. Twenty-eight of these 60 respondents expressed interest in participating in a focus group. Furthermore, 22 of these 28 respondents met the screening criteria for focus group recruitment. For the remaining 6 respondents, the reasons for exclusion from recruitment included:

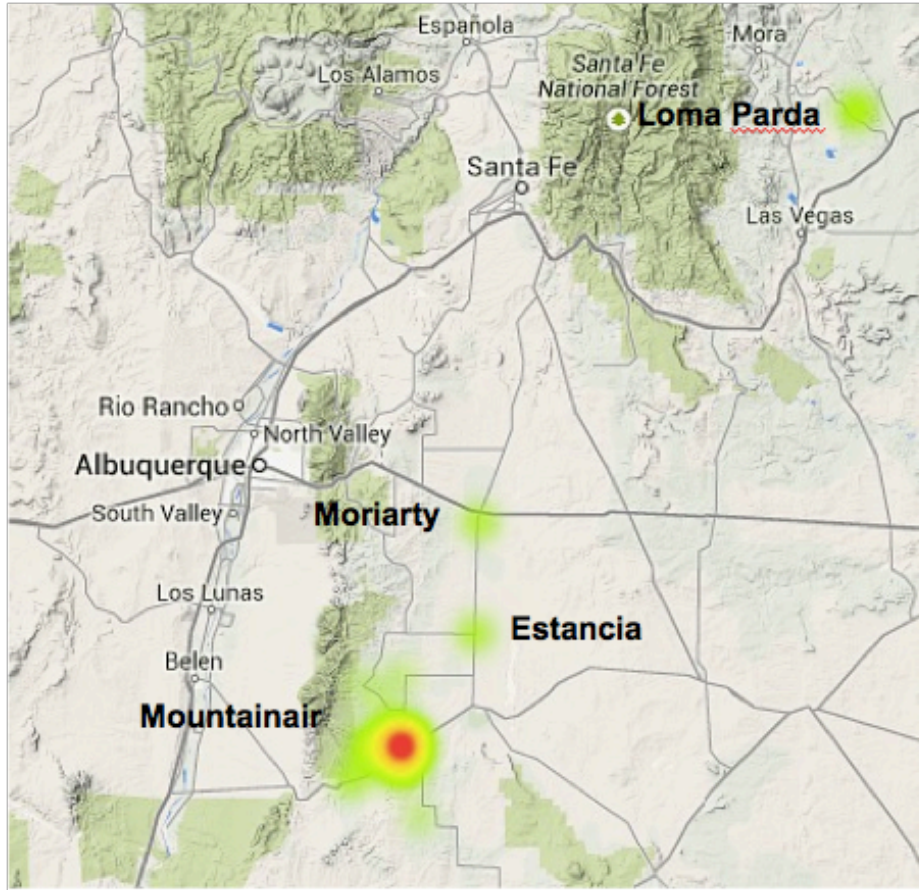
- Not being a Torrance County resident (either full or part time)
- Indicating a lack of knowledge about the proposed pipeline (had never heard of the proposed pipeline or knew very little about it)
- Not providing contact information through which they could receive an invitation to participate in the focus group

Eighteen of the 22 respondents were contacted with an invitation to participate in the focus group before 10 participants were confirmed. Among the remaining 8 respondents who were contacted but did not participate in the focus groups, 2 were unavailable to participate on the designated date and 6 could not be reached.

One in two respondents are between the ages of 61 and 70. The vast majority of respondents (52 out of 56) are over the age of 51. Respondents who identified as Retirees/Transplants Only made up the greatest proportion (42 out of 53). Those who identified as Farmers/Ranchers, Land Grant Family or any combination of the three categories were minorities in the survey.

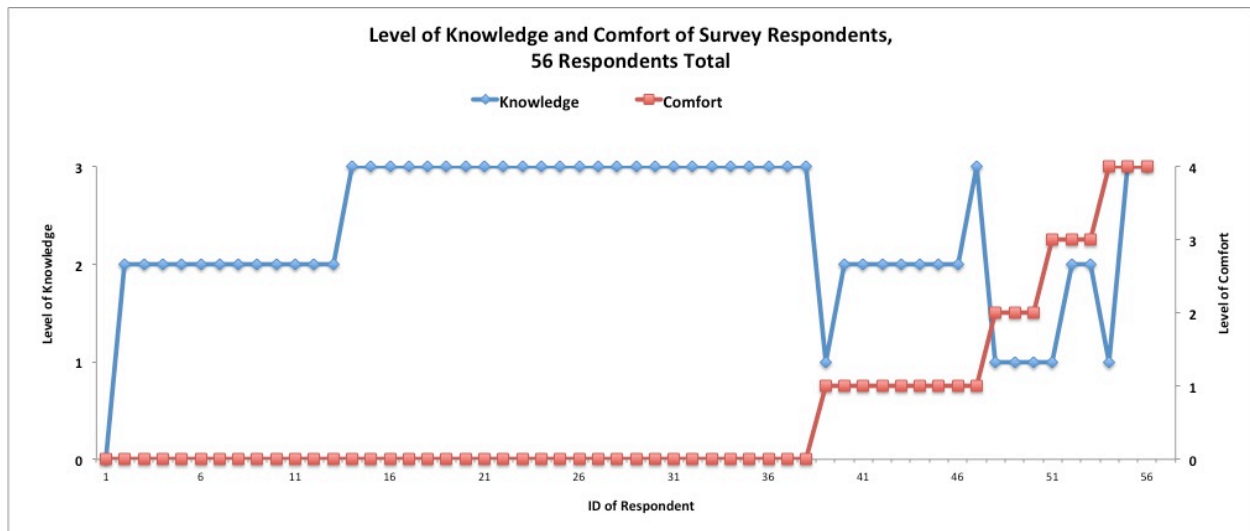
A summary of key respondent characteristics, location within Torrance County, as well as attitudes toward and level of knowledge about the proposed pipeline, are included below.

*Figure A-1. Survey respondent location within Torrance County*



The majority of respondents lived in or near the town of Mountainair, with the remaining respondents scattered throughout the County, including the towns of Estancia and Moriarty. A very small proportion of respondents lived in areas outside of Torrance County.

Figure A-2. Attitude towards and level of knowledge about the proposed pipeline among survey respondents



The vast majority of respondents had low levels of comfort with the pipeline, while simultaneously having high levels of knowledge about it. The level of comfort with the pipeline among individuals reporting lower levels of knowledge was more variable than among those respondents reporting higher levels of knowledge about it.

**Focus Group Guide**

HIP prepared a semi-structured focus group guide consisting of a set of basic questions to facilitate conversation. Due to the broad nature of the research questions under consideration and the fact that the focus group was meant to identify the highest priority concerns expressed by participants, no probes were formulated ahead of time in order to avoid leading participants to mention specific, pre-defined topics that would not have otherwise been brought up as highly important. In additions, prompts 1, 2 and 3 included a mapping component to visualize the focus group responses and facilitate discussion. See below for a full list of questions:

1. What places or landmarks in Torrance County have cultural or spiritual significance to you? What is the cultural and spiritual significance of these places or landmarks?
2. What do you think – or what do you imagine proponents of the pipeline might say – are potential *benefits* of the proposed pipeline? How so? Are there any specific areas – either towns, or communities or other lands – that might experience those benefits if the proposed pipeline is built through Torrance County?
3. What places or landmarks do you think may experience potential *harms* if the proposed pipeline is built through Torrance County? What harms might these features or landmarks experience as a result of the proposed pipeline? How so?
4. What benefits or harms have resulted from past development projects in Torrance County – including other pipelines or utilities and industrial projects?
5. Describe what relationships and interactions were like between people in Torrance County two years ago. Now describe what they’re like today. In what ways have they changed? Why? Are social connections with people in the county important to you in your everyday life? In what way?
6. To what extent do farming and ranching influence the identity of your community and its traditions?

**Codebook**

*Table A-1. Focus group codebook*

Category	Code	Label	Source
Culture / Connection to land	Sacredness of land/ancestral sites	A1	Scoping
	Stewardship over land	A2	Scoping
	Natural beauty	A3	Scoping
	Identity/way of life	A4	In Vivo
Land use	Industry/utilities	B1	Scoping
	Self-sustainability	B2	In Vivo
	Ranching/farming	B3	Scoping
Economic vitality	Jobs/income	C1	Scoping

	Tourism/taxes	C2	Scoping
	Traditional livelihoods	C3	Scoping
	Property value/insurance	C4	Scoping
	Pipeline maintenance	C5	Scoping
General health	Mental health	D1	Scoping
	Social health	D2	Scoping
	Physical health	D3	Scoping
Safety	Explosions/ruptures/leaks	E1	Scoping
	Emergency response capacity	E2	Scoping
Water	Access/Quality	F1	Scoping
Environment	Air/Soil/Wildlife/Climate	G1	Scoping
Equity / Ethics	Historical trauma	H1	Literature
	Marginalization/empowerment	H2	Scoping
	Social responsibility	H3	Scoping
Recommendations	Alternatives / Mitigations	I1	In Vivo
Marginalization/oppression	Symbolic/structural violence	J1	In Vivo
	Critical consciousness	J2	In Vivo

## Focus Group Summary

### Focus Group A

#### Theme: Culture and Connection to Land

##### [A1: Sacredness of land / ancestral sites](#)

Focus group participants stressed that Torrance County is a culturally and archaeologically important site due to the numerous ruins of the Pueblo people that are found throughout the country, both on public and private land. In addition to the more widely-recognized monuments in the county, such as Abó, Gran Quivira and Quarai, which are sacred to many residents of the county as well as active archeological sites, there are other lesser-known but important sites, and residents of the county often find artifacts on their property that signal the existence of submerged Pueblo ruins. This cultural richness contrasts with developers' and outsiders' notions that there's "nothing" in Torrance County, and that development is therefore justified since "nothing" will be impacted.

- Abó is sacred land to current tribes, too. It's not dead. It's not dead land. And it's an archeological draw. I mean, since I've been here, there were two different years where teams of archaeologists would come and encamp in town, but they would go to Abó, and they would go to Quarai, and they excavate and learn, and then they cover it back up so it doesn't get further destroyed. So they are active archeological sites as well.
- [re: culturally significant sites in Torrance County] It's not restricted to the actual designated National Park Service sites. The sites are all over this area. You couldn't

probably throw a stone and not hit something. So they may not be as significant, or as well preserved, and as abundant as at Quarai and Abó and Gran Quivira, but they're everywhere. And families and generations that have lived here forever know where these places are. But it's not known, necessarily, to the public. Many of us have found pot shards and arrowheads on our own land. I've found a mano made of stone to grind the corn. I did not find a metate, but I found a mano. But it's all over here. It's just everywhere.

- The land grant community that are on the east of the mountains that run up Highway 55 are really significant communities to the historic and cultural region. They're all over - pueblos [submerged ruins of former Pueblo settlements] all along there. Some are buried. Most of them are buried. And some of the pueblos are on private land.
- And I think part of the irony is also that a corporation like Kinder Morgan will look at the map of New Mexico and say there's nothing there, and that's why they're putting the pipeline there. But there is something here, and we all know there is, and that's what we want to keep.

#### A2: Stewardship over land

Some residents discussed the need to preserve Torrance County's cultural and natural resources from damage due to development, as well as protecting their own land from intrusion and damage that could be caused by development activities.

- There's prehistory at Abó. There's cultural history. You have the Pueblos that were there. There's a rock garden. If they do any drilling or blowing up, you damage that, and it's gone forever. The water. There are arroyos there. Everything is affected: the land, the animals, the people, the culture that you will deny other people coming and learning about, and the history. It'd change the land forever.
- If they put that CO2 pipeline through, they have to check that, federally, I think every month. Every five or six weeks, they have to fly over or walk it. So you're going to have people on your land, so you're going to lose your privacy. And people online have said that they complained, people who have pipelines over their lands, saying that gates have been left open, cattle have escaped, cigarette butts, fires have been started. You know, they're peeing on your land.

#### A3: Natural beauty

Many residents highlighted Torrance County's natural beauty as a reason for settling there, and described the landscape and the night-sky as valuable assets for residents. These assets range from very personal (e.g. the view from residents' porches) to very public (e.g. broad vistas). The area's natural beauty comes from the geology and the flora of the area. Residents expressed concern that development activities would cause blight on the land, including scarring of the land from trenching for the pipeline's right-of-way, as well as pipeline infrastructure above the ground surface. Of particular concern is the fact that this scarring is long-lasting due to the fragility of the flora in the area, and the environment is not likely to recover from damage quickly.

- The geology of the area is amazing. I mean, it's sitting between two arroyos. Another aspect that attracts people is the vistas and the landscape that is unique, in that you can see for a long distance. You have the flatlands and the mountains, and it's a combined vista that not everybody gets to see. And the night skies.

- It's beautiful, it's peaceful. It's a place to go hiking. It saves your sanity. The maple trees turn red in the fall. I remember my first year here. I moved here in August, and my friend and I were driving to Albuquerque. We'd left Tajiue, heading east, got to Highway 55 and turned north and looked back, and the whole mountain was red. I thought, uhhh, that didn't look that way a few weeks ago. But they do. Maple trees turn red. It's a beautiful drive to leave Tajiue and do a loop drive and come back out in Torreon. It's just wonderful.
- I'd like to talk about the pipeline itself a minute. First of all, what we're talking about is a pipe that's going to be 16 inches in diameter, and as a start, they plan to push 300 million cubic meters of gas through it, with the equivalent of about 3 Olympic sized pools. Okay. This is going to be under high pressure going the whole distance. Along the way, they're going to have pumps. They're going to have supervisory control and data acquisition systems that are supposed to monitor the flow, and hopefully will be able to control the flow. And according to federal regulations, they've got to have storage facilities in case they have a problem. Well, in addition to the problems just caused by the CO<sub>2</sub> gas, you're going to have visual pollution. I mean, as somebody already pointed out, I didn't move out in the wilds to live in an industrial suburb. And the last thing I want to see is a big hairy piping center or a big tower at a storage facility.
- I've been all over the country. I've driven the southeast US for 20 years. And you can see tracks on different places, the land you can see in Las Lunas, just everywhere, for these little two-wheelers. And so it's a visual thing. If you do a 100-foot swatch, no matter what you do, it's going to be visible probably from space. Not from outer space, but from our space, and it's going to be visible for the rest of our natural lives, and it will be an eyesore, period.
- And so, you know, we are looking at the possibility of huge scarring on the land. I pulled a trailer onto my land in the summer of 1994 and soon thereafter had a telephone wire brought in. The guy installing the wire was on a little home lawnmower. But it had a digger on the front and the cable on the back. And as he dug, the cable got laid. It took 12 years, 12 years, for those tire tracks to go away. The land is too fragile. We can't do this.
- I have 40 acres. And when I bought my land there was an old transmission line, about 40 feet, going through there. And I checked, and that line was not being used. It's used twice a year as a backup. So it was kind of like, hmm, should I buy this land with this old transmission line? But it was so pretty I bought it, right? So then about two or three years ago PNM buys that easement, and now I have 90 foot transmission lines that go right through the middle, right through my property. Big steel pipe, oh they're ugly. So if I sit on one of my porches, all I see are these big steel pipes. And then I went down to Zoning and I go, I think my land should be worth less with these big pipes. And he goes, well, you got paid for that, so it doesn't matter. And I go, I didn't get paid the value, how they devalue my land, they do nothing but devalue my land. And so he says to me, well, I'll talk to my supervisor, but I don't think so, sorry. So if the pipeline goes through, Zoning here is not going to devalue your land for it 'cause they don't get it. They only devalue your land when you want to sell it.

#### A4: Identity / way of life

Participants identified three distinct communities and lifestyles in Torrance County from three successive waves of settlement to the area:

1. Indigenous people and land grant families that have settled in the area for centuries



2. Homesteaders/ranchers that settled in the 19th century when the railroad was built through the county
3. Retirees and artists, tending to be older, well-educated and civically engaged, that have recently settled in the area from across the country

Participants, all of whom belonged to the retiree/artist community, expressed special concern for land grant communities, and the impacts the pipeline would have on their long-standing way of life, and their sovereignty over the land. Participants also expressed that they chose to retire in Mountainair in order to get away from urban life and enjoy peace and tranquility, and see the pipeline as contrary to that sense of peace, quiet and isolation.

- There's a family that lives at Abó that has lived there for 14 generations. At one time, Abó was part of their land. Their whole lineage, their history is there. There are people living there. And there are people that have church services there once a year. You're going to deny them that [if the pipeline is built].
- I, for one, didn't move to Mountainair because I wanted to be in the city. And you start messing with the night sky and et cetera, et cetera. The rural character, the vernacular sort of architecture. All of that makes Mountainair a pretty unique community that you don't find elsewhere. And the families that have lived here forever still live here, and there are a lot of newcomers that are coming here because of the attractions of not being urban, and being rural, and being quiet and peaceful.
- I want to say one thing about, not Mountainair itself, that is that it has a history that predates its official founding, but it's also a good example of the homestead movement in the United States. It was a town before the territory was a state. So there's people here who still have memories about that from when they were children, about that part of the history of this part of the country.
- There is a large artist community [in Mountainair]. And a lot of people are retiring. Most of the newcomers are people who are retiring here.
- Local families have people buried on their land. They have histories going back... You know, they haven't moved since 1830, and now you've got these people coming in, oh, we've got eminent domain and we're going to go through. Well, you've got to consider the cultural impact of that and the fact that these guys aren't suburbanites. They live in the same place and they love their land. And they couldn't imagine not living there. And to have somebody come in and say, your land is ours, which is what happens, because when you have a pipeline put through, I didn't know this, but if you have a mortgage on your land, the pipeline becomes the primary mortgage owner and you become the secondary one. And you can end up losing your land. That's baloney.
- There are three communities who live here. The Hispanic community didn't come across the Rio Grande last year. They've been here measured in centuries. Okay? There is a rancher community that came in in the 19th Century. The homesteaders that the railroad brought in, a rancher community. And the third community, probably the smallest, is the outlanders who have come from California, from Minneapolis, from New York. And they tend to be old, artistic, educated, and pissed off. Because we're tired of this thing [development on their land].

**Theme: Land use**

### B1: Industry/utilities

Participants mentioned other developments, including wind farms and and electric transmission lines, for which there have been similar controversies in the county.

- And that's the power line that's going through my land is from the wind farm. And they're planning on building some more wind farms and making a whole 'nother transmission line that's 120 feet tall. I hope it doesn't go through but it's been talked about.
- Well before we had this problem, we had the SunZia line, where it was originally going to go down the BLM railway here, and there was a big brouhaha, and they finally decided to move it down to White Sands, and that apparently where they're going to put it in now. But that's a big eyesore, too.

### B2: Self-sustainability - n/a

### B3: Ranching/farming – n/a

## Theme: Economic vitality

### C1: Jobs/income

The general consensus among participants is that the economic benefits of the pipeline will go primarily outside of Torrance County, including to Kinder Morgan and its shareholders, as well as to regions in Arizona, New Mexico (outside of Torrance County) and Texas that are active CO2 and oil extraction sites. One participant also expressed that the vast sums of money transacted in resource extraction and transport are a major driving force behind the politics of the region, and that politicians were unlikely to oppose such development. While residents acknowledge that some benefits would be felt at the local level from jobs and fringe expenditures from construction crews, they questioned the true extent of the number of local and permanent jobs that would be created by the pipeline. Additionally, Participants also felt that the compensation provided to landowners would be minimal. [see C1, C2 and H2 for further substantiation]

- The main benefit I would think is for the Permian Basin and North Dakota [hydraulic fracturing / enhanced oil recovery sites], so the Permian Basin includes west Texas and you forgot to mention that [some of the fracking sites are in] eastern New Mexico, so it's not just west Texas. Eastern New Mexico is really growing, so between the Permian Basin and North Dakota, the US is now almost energy independent. Saudi Arabia was the top oil producer, now the US is the top oil producing country in the world, because of fracking. Because of CO2. So this is why we have such a hard fight because the government, our governor, and Washington, they're all going to make huge bucks off of this. The State of New Mexico. The State of New Mexico, a third of their budget comes from oil and gas. So when this CO2 goes to the Permian Basin and New Mexico, we're going to make a lot of money and that may go to our schools. It's supposed to go to our schools. Hot discussion on that.
- Well people say it's going to be money for the town [if the pipeline is built]. It won't. There's going to be money for the people whose land it goes through. Like Marilyn, if it goes through her land, she can negotiate a deal. I'm her neighbor. It will ruin my property value and I may not negotiate a deal. They are offering like \$10 a linear foot so if they went through my property they'd probably like offer me \$4,000 or \$5,000. They pay nothing. In comparison to what these people [Kinder Morgan] are making? It's

bupkis. It's nothing. And all we can do it take them to court and try to get more but that's what they're selling you for.

- And the [local] jobs they claim will be cleanup jobs, if that. They bring their own crews with them. The crews come in. They do their work. They leave. They move on to the next site. The amount of money that they're going to make economically in the town from the crews is minimal. It's minimal.

### C2: Tourism/taxes

While residents acknowledge that some benefits would be felt at the local level from taxes, residents felt that the costs of the pipeline far exceeded any funds generated as a result of it, either from their own estimation or the experience of other counties. They also felt that the funds to local and state governments from the resource extraction industry as a whole meant it was unlikely that local and state officials would oppose such developments.

- Abó is a big tourist draw, too, for the town. But Mountainair will also get tax money because [for] every road that goes over a pipeline, they will get money for taxes. But it's not going to balance out in terms of what it's going to cost. And they will get pennies on the dollar, if that. If that.
- Pima County did a study about this, what they got, what they were promised, what they were given, and what it cost them. \$11 bucks on the dollar it cost them.
- Our politicians can't be against it because we're a gas and oil state. So if we get a third of our income from gas and oil they can't come out and say I'm against gas and oil, no way, they can't be against it.

### C3: Traditional livelihoods - n/a

### C4: Property value / insurance

Participants expressed concern that the pipeline would diminish their property's value due to concern over safety, and suggested that there may be insurance implications as a result. One resident expressed that, for tax purposes, their land value was not adjusted for depreciation due to development by local zoning bodies, and yet this value was deducted when assessing sales prices. [see A3 for further substantiation]

- It's frightening. It's just fricking frightening. When they were talking about it going through [a neighbor's] land, that means I have to drive across it twice to get home. No matter how I go home, I have to drive across it twice. What's it going to do to my property value? That land out there is all I have. There ain't no 401(k). There ain't no pension plan. There's not even a fricking savings account. That 80 acres is all I have and I have no leverage with this company because it's not going through my land. I mean, I've got nothing else.

### C5: Pipeline maintenance - n/a

## Theme: General health

### D1: Mental health

Participants were concerned over the stress that the pipeline is causing and would cause if built. Sources of stress included concerns over lack of information, lowered property values, use of pesticides, safety concerns, and conflicts with neighbors.

- So it isn't just the fact that the water's the issue, it's all the stress that we're all in. We're all just stressed out constantly. Stressed about the insurance, stressed about the water. Stressed about the land values. Stressed about the pesticides they're going to spray to keep the access. We're just constantly stressed out. [Even] if it [the pipeline] never did [leak], you'd still have to live with the chronic stress.
- [re: biomass plant project] Often during that fight, I felt like I was one of three to six people who were really putting it out there to fight it. And I was exhausted. And I got shingles. And so it was very, very, very stressful. And many of the ranchers were not behind it because they thought, hey great, they're going to kill my trees and I'll be able to have more grass for my cattle, so they weren't behind that. And I see a little more support from that faction this time around. So in that regard I think it's a little bit better because this is big.
- I think they go together like this. You know one of the problems is an acute problem. The pipeline leaks or breaks. The other problem is chronic. And that's, you know, I mean nothing may happen in ever with that pipeline if it's built, but people have to live with the thought or the idea, the stress, that it might happen all the time. Fear. That's the chronic condition of living with a thing like that in your backyard. And we're already living with that because we cannot get any solid information about where the damn thing is going, even though on that map, the blue line is already being constructed down across highway 60 just after you have crossed the railroad. It's there. It's already underground. So there's no doubt that not only Kinder Morgan but the BLM knows where that pipeline is going and yet they profess uncertainty. And I think that uncertainty which feed directly into our anxiety here in town is deliberate. I think we are to be kept in the dark as long as it suits BLM and Kinder Morgan who are, I think, the same organization.

## D2: Social health

Participants had mixed feelings about the proposed pipeline's effect on social cohesion. Some acknowledged that the pipeline has brought diverse community groups together, while others pointed out that this alliance was fragile and held together primarily by a few key, trusted people. One participant out that there are varying levels of social cohesion within each community. For example, more cohesion among land grant communities due to having large extended families, and less so for individualistic retirees, artists and transplants.

- I think we've got a strong source of trust.
- [re: trust in the community before the pipeline was proposed] No. People have been trying to build up the trust [since the pipeline was proposed]. This can either build it or it can tear it apart. You're at a very scary juncture.
- To some extent, I think this pipeline has brought factions together, not completely, but I see much more involvement and much more cohesiveness around this issue than we had around the issue of the proposed biomass plant. And that's a good thing. Kinder Morgan has done us that favor.
- [re: the pipeline bringing factions together] Only by a little bit and it's very, very fragile. It's really fragile and it can be broken just in a minute, in a second.
- I would say we're really talking about two different things here. There's a good deal of social cohesion in this community. You have big extended families and you have that cohesion which has always been there and still is there. That's one thing. Then you've

got all these newcomers, the interlopers, who are from all parts of the country and have no cohesion [the speaker identifies himself as a member of this group]. But this is bringing us together. But we really need to start an education program, because a lot of people just don't know about it. You know, a pipeline is a pipeline.

### D3: Physical health

Participants discussed the potential consequences of a pipeline rupture, with intensity of impacts ranging from dizziness to death. [see E codes as well]

- You know not, just the stress and anxiety, but if there is a rupture and CO<sub>2</sub> escapes as a vapor and so if there's significant if not devastating health impacts that people closest to the line are going to feel but people in the general area are also going to experience. So that is a significant impact as well. Well it could be asphyxiation, anything from dizziness to headaches to wobbles, the associated symptoms that go along with an airborne contaminant. Death.
- The problem is that most pipelines that have a major rupture, it's when a piece of machinery accidentally hits that pipeline. And you get a huge rupture and then that could send—I guess the CO<sub>2</sub> is in a liquid form and when it hits the air it turns into a gas. And that can send the gas for miles, miles and miles. And a whole area would have to be cordoned off and anybody downwind of that could die instantly within a minute.

### Theme: Safety

#### E1: Explosions/ruptures/leaks

Participants felt that pipeline failures were inevitable, and the impacts of such failure ranged from physical health, to the health of the local water and environment, to the heritability of the land, to drug trafficking. One resident expressed concern over the lack of egress routes from her property that would not cross the pipeline in case of a failure. Participants also expressed concern for Kinder Morgan's quality assurance and ethics track record.

- The scariest part is, if there's a leak, you could die. And you can't smell it and you can't really see it. You might see the cloud of the initial release but if you have a small leak you're not going to see it, you're not going to smell it. You just die. There probably isn't any pipeline around that hasn't suffered some kind of maintenance problem. And if it has water in it it's one thing, but if it has CO<sub>2</sub> in it, it's another issue altogether, so the danger inherent in this pipeline - and unfortunately people don't realize that - is that their kids are going to be exposed to this. Maybe by the time it gets in and has a problem their kids are going to be the ones that are going to suffer. And the kids won't have land to be inherited.
- So if they were going to go like 100 feet from my house and there was like a big problem, too, that would be the welds. If you look online like that XL Pipeline, they had so many problems with the welds. I mean it was like they had to dig up miles and miles of pipeline 'cause the welds are really so bad that they now have a third independent party checking these welds as they're building them. They bring the pipe in in sections. And then on your land they set up a little guy who's sitting there under a little tent that welds them together. And that these welds, Kinder Morgan has a bad record on welds. And the XL Pipeline, the welds were so bad I think them made them redo like 200 miles of pipeline. And now they have a third party that has to go, after they weld, the third party independently has to come by and inspect each weld. And so that's where they

also have a big leakage in the welds. And the larger the pipeline the more problems with the welds. And these pipelines are huge.

- Have you seen the article about how the narcotrafico - narcotics trafficking from Mexico--between Mexico and the United States is running along pipelines right now because the land is clear. It's clear so it's easy and it's in isolated areas so there's nobody policing it. So all these drugs are being run along pipelines. And they're running parallel to Highway 25, too. There's some people lived out [in the Mountainair area], this guy goes out to his barn and there's this couple out in his barn threatening him. They were running drugs because they run parallel to [Highway] 25 where they take the back roads. They follow the pipelines. They take the back roads. You have Highway 25 and Highway 40, major, major highways for drug trafficking.

### E2: Emergency response capacity

Residents felt that there were inadequate emergency response measures in place in case of a pipeline failure. At the local level, emergency response and medical attention resources are scarce. On the part of Kinder Morgan, participants felt that government regulations were not adequately enforceable, and that Kinder Morgan has not announced a comprehensive emergency plan similar to those of other developers.

- As I understand it the Kinder Morgan plan for emergency is we're on our own. We have here, volunteer firefighters. We have two cops. [sarcastically] I guess both of them would be deployed in an emergency.
- Dakota Gasification in North Dakota. Their response is amazing. In the first minute they notify the 400 people on the line and they'll keep dialing them every 3 minutes until they get them either on their cell phones or their regular phones. And they'll tell them whether to stay in their house, to go out, which way to go, and then you can't have one response team, you have to have two response teams and a safety officer. And the second team has to be there before the first team goes in just so that the first team doesn't get asphyxiated. That's not Kinder Morgan's problem. Yeah, that's Dakota Gasification. [Statement was made to indicate that Kinder Morgan does not have such a plan in place]
- Well, I found out that the federal regulations are such that they [Kinder Morgan or other pipeline developers] are supposed to respond themselves and that there are people in the control rooms that are monitoring these SCATA systems that are supposed to be on 24/7. And their first act is always to sound a warning if there's a leak. The problem is there's nobody to enforce those regulations because the geniuses in Washington [the federal government] have decided to cut the funding of the Environmental Protection Agency to the point where they can't monitor who's doing that. [sarcastically] So you can imagine how good Kinder Morgan is going to be in really watching that stuff. Because that's cutting into their bottom line. And I point out that we're not plants so we can't breathe CO2 and put out oxygen.
- The town and county don't have the infrastructure or the funding sources to handle any—even a minor problem, let alone a big one. And we don't have emergency response teams. We don't have a hospital. I mean, there's a lot of issues. The Sheriff's Department shuts down on weekends. That's not a joke. And their emergency response team has to go in with full oxygen. That's what Kinder Morgan says. They have to go with full oxygen and tanks to the area. And there's another issue, is there's no regulatory agency or commission to oversee CO2 pipelines. There is none. Nobody is

giving them any kind of guidelines. Nobody is giving them any kind of monitoring rules and regulations.

**Theme: Water**

**F1: Access/Quality**

Participants stressed the importance of the Estancia Water Basin and of water in general to Torrance County residents, especially those reliant on wells, as well as its fragility and scarcity of the water in the area. Water has been an important resources for centuries and is a primary reason for human settlement in the area, as attested by petroglyphs in the area. Pipeline construction may cause changes in the water's course, as well as contamination.

- The Estancia Water Basin is probably the primary water basin in the state. Most important water basin. The issue with the Estancia Water Basin, several years ago the State Engineer closed the basin to any new water development. And probably ten years ago or so the Soil and Water Conservation District had put out a little pamphlet that was talking about water here and at that time they projected that maybe there was another 125 years of water in the basin. What's happening is that as the fresh water is pulled out, saline water is coming into the aquifer to replace it, which is not a disconnected thing from the fact that there are salt lakes out here. Which is also history to this place. But the water here is very, very fragile and there's not much left of it. And it's going to make a huge impact on the agricultural community that has been farming and ranching off of the water in this basin for a long, long time. And that basin is soon to be depleted of its water supply.
- And not to understate or overstate the issue of water, if you don't live in town you're probably on a well. And if you're on a well and they're blasting, you can imagine what's going to happen with a well. Or even [if they're] just [using] heavy equipment, because we're so close to the bedrock. And so isn't the town affected as well? Because the town water comes from Willard.
- And when you've seen the machinery they're going to use millions and millions of gallons of water a day to keep that dust in. So I think there's some towns that would not let them use their water supply to keep the dust down because they used so much water. I don't know what the actual amount would be.
- One is the CO2 that's going to be pumped through that pipeline is not a benign gas. And it can very easily pollute our water basin because what happens when carbon dioxide is mixed with water is you get carbonic acid. The other thing is they've got a propellant they use which is also toxic. So it's threatening essentially our water basin here which, if that goes, Mountainair is going to be a ghost town.
- Especially they said that this land is very hilly. Like my land, I'm up on a hill and it goes down and it goes back up and for a lot of people in Deer Canyon [Preserve], the land is hilly. And Kinder Morgan said when they put a pipeline, when they clear that 100 foot [right-of-way], they're not going to make it back into a hill. So if they clear it straight it's going to be straight and that's going to really affect your water flow. And it's going to affect the way everything drains and runs on your land. So you could have a hill and they're just going to level it.
- Water here is so sacred. There have been petroglyphs in the area that talk about the quality of the water. I mean, just look at our climate and think about how important water is to us. It is crucial. No living thing can get by without water. None. And we don't have much. And the thought of even a minor threat to our water supply is huge. It's

huge. The basin won't go through three more generations of people with water. It won't. It's not there. Where I live is barely ten miles outside of the Estancia Basin as has been mapped by the state engineer. We're right on the edge of it. That's it.

**Theme: Environment**

**G1: Air/Soil/Wildlife/Climate**

Participants expressed concern for the negative potential impacts of the proposed pipeline on the environment, including damage to wildlife populations, endangered or otherwise; air quality due to the spraying of pesticides to keep the pipeline right-of-way clear and sulfur dioxide from pressure pumps; and the effect of drought from waterway disruption that could cause desertification. In particular, the areas around the 100-foot pipeline right-of-way would be heavily impacted and unlikely to recover back to its pre-pipeline state, and trees would have to be cleared from the right-of-way.

- It's also full of natural resources, wildlife and vistas and plant life and all that is encompassed by the natural ecosystem here. What about the endangered species that are around? How do you protect them from Kinder Morgan?
- I'm here because of the clean air 'cause in Albuquerque I've been experiencing illness from the city spraying pesticides and I asked an environmentalist in the state and I said, what's the cleanest area in the whole state, and he said Mountainair was one of the cleanest areas air-wise, because there is hardly any traffic, there's no farming, there's no business. And so the air is very, very clean here. And that's been a big impact with sulfur dioxide and all this stuff escaping from the pressure pumps and the pipeline.
- We have some very fragile ecosystems here. Up in Madera Canyon we have one. It was once known as the juniper piñon woodlands. And that is changing into being a juniper savannah because of the drought, but right now it's woodlands. Those things are complicated systems that have plants, grasses, animals, and trees and the same is true for Cibola National Forest. Those are complex collections of natural things put together, working together, to do certain things like serve as a carbon tank. And when you put a pipeline like this, you're disturbing that system. And when you disturb that system it may not come back the way you want it to.
- One of the things in the Cibola National Forest, if you go up to Capilla, Hawk Watch International does counts bird counts from August to November. And the reason I learned this last year is because in that mountain range there is a saddle and the birds come from Canada and they come down and at that saddle in the Manzano Mountains right here, they cross over to the west side to continue on down to Mexico. That's a pretty unique spot and it's an amazing spot. It's a nationally recognized migratory route. They are up there. We've gone up there and just watched the birds. You just come by and it's a wonderful experience. You can see eagles and hawks and falcons and kestrels and you'll see just about every type of bird of prey come right through that area in the Cibola National Forest.
- And not every forest in the area is designated a national forest. And this is a national forest. Cibola [National Forest], we have the National Park Service sites. We have the US Forest Service sites here. And along with that goes all of the attributes that go along with a national forest. The species diversity and the wildlife and the plant life so it's an integral part of the whole environment. Part of that national forest is a wilderness area, too. Where we're not allowed to cut wood. No vehicles, no roads. And parts of it are recreational and then open for resource use like woodcutting and hunting at certain times.



- They [Kinder Morgan] want 100 feet. They won't go through my land. If they took 100 feet from my land, they're going to have to cut down thousands of trees. And PNM, they cut down two trees when they installed a transmission line. So they really made an effort to not cut the trees. You also can't have any trees over the pipeline stretch. I mean trees are not allowed to grow where the pipeline is because the roots will impact the pipe. So it's got to be clear of vegetation.
- And in the best case scenario even if we were to be warned about a pipeline disaster, who's going to call the squirrels? Who's going to call the deer? Who's going to call and tell the rabbits that maybe they should move because they're going to be asphyxiated in the next two hours? Or all of our own pets and livestock and so forth?

### **Theme: Equity / Ethics**

#### H1: Historical trauma - n/a

#### H2: Marginalization & empowerment

Participants expressed concern that the interests of corporations such as Kinder Morgan and their political dependents (local and state governments) were being placed above those of landowners, and that inadequate funding was allocated to the enforcement of protective measures for potentially affected residents of development projects. Some residents cited a lack of concern for human dignity and ethical malpractice as a consequence of corporate greed, and felt that communities in Tarrant County would be victimized by these forces as well.

- If you want to talk about Kinder Morgan, one of the things that annoys me is the fact that they are essentially ignoring the wishes of the landowners that go back 8 and 10 generations.
- I believe we had a \$6 million budget in New Mexico and I think over a third of that is from oil and gas royalties. And our governor is really pro oil and gas and she's said a lot. She's cut all of the environmental rules. She's made it easier for them to come here and cut a lot of the environmental rules before she got in.
- Who enforces those rules [and regulations on pipeline developers]? That's the problem. Nobody, because Congress has cut the funding on regulatory agencies, there's nobody that can actually enforce it, but it's on the books. They have the agency to oversee water, Federal Energy Regulatory Commission which is FERC but there is no agency to carry out the enforcement of any regulations. That's what worries everybody. We're being used as guinea pigs. CO<sub>2</sub> is not being transported in pipeline to the same degree that gas is, that oil is, it's kind of new. And we're being the guinea pigs. It's 1-2% of all the pipelines in the whole USA. I'm not liking it. They're just trying it out on us because [sarcastically] there's nobody out there in the middle of New Mexico.
- This whole thing feels about as inhumane as you can about wrap your brain around. There's no humanity in this at all. There's no concern for people. There's no concern for the environment. There's no concern for anybody, anything, other than Richard Kinder's pocket and his shareholders' pockets. End of sentence. That's it. They don't give a shit. They just want to make a bunch of money. And they don't care who gets hurt along the way. But that is the way of the American corporation.

#### H3: Social responsibility - n/a

### **Theme: Recommendations**

## I1: Alternatives / Mitigations

Participants suggested mitigations such as routing the pipeline on existing right-of-ways or areas zoned for non-residential use. One resident suggested adding an odorant to the gas so that it could be detected by smell in case of a leak, or requiring sensors along the pipeline to detect failures.

- And there's a possibility that one of the routes for this pipeline could be the same route where SunZia is down Highway 38. And that's what we were pushing for 'cause that's along White Sands. But the Defense Department doesn't want it. Now let's see, who has more clout? Mountainair citizens or the Defense Department?
- We could request that if they're going to come through here they put something in there that smells. Like they do it with natural gas.
- You could request they put sensors along the route that would ring but they don't do that. I mean there's other things you can request that they do. But good luck.

## Theme: Theory of marginalization/oppression

### J1: Symbolic/structural violence - n/a

### J2: Critical consciousness

Participants stressed that some landowners were unwittingly ignorant of the potential consequences of the pipeline, and that if residents were better-informed, they might oppose the pipeline or “wake up” to the reality of the situation and be better able to weigh the risks and benefits of the pipeline together.

- So you know people are fooling themselves and they think that they will not be affected. And that comes from ignorance and not knowing.
- I will get money for easements. But if they evaluate how much money they're going to get and then the degradation to their land that they don't realize. Unfortunately this is such an educational thing because if you haven't been involved in this you don't know what the effects are going to be. You simply are not aware of it. They don't know that Kinder Morgan is going to put that pipeline in there but they're going to be responsible for the maintenance of the pipeline. And if the water comes through it and it erodes the pipeline so that it's visible, the land owner is responsible for that. Once they're in and out they have nothing more to do with it. I spoke with one person who has a whole section down here whose land it might be going through. And I saw the wife at the grocery store and I go, you know, it could be dangerous. What if the pipeline leaks? It could be dangerous. I said it could leak. She said: "Why would it leak? They're going to do a good job because they don't want to lose their product."
- You know we have a lot of hurdles to get over. One of the major hurdles is helping to educate people. Education is primary. People here don't necessarily read the papers. The other thing that we have to build is trust. There is no trust in this community. I can turn around and tell him something. He may nor may not buy what I'm saying. But there is no trust and we need to educate people in the community, the ranchers, the young people, we have to find a way to pull them in because down the road they have to understand it's them it will affect. You know I'll be dead in 30 years but they'll still be here.
- It does seem like if you approach someone and talk to them about it, they don't really know about it and you really start telling them, then they're all of a sudden like they wake up. So I would have to say that a lot of people that aren't participating, I think it's ignorance. It's they really don't understand. They just think it's a pipeline. And they've

lived with pipelines, you know, like they were saying, there's pipelines all over. But when you really start talking to them about it, about what this pipeline is then all of a sudden they're not too happy about it. So I do think that it's, on some level, it is kind of waking people up, if you approach them. And I think that's actually interesting. It's a catalyst.

- Well I think it's a difficult educational process. I know with the biomass plant I went to the school and I talked to the biology classes in high school. And a lot of those kids come from families who have been woodcutters for generations. And I sat down with them and talked about the numbers. So okay, this plant is going to burn 27 cords per hour. What do you burn in your home for the winter? Well, 4 or 6 cords. Uh-huh. So there was something tangible that meant something to their family 'cause they're thinking, oh yeah, you know we'll get the woodcutting contracts. Yes, and you won't have anything to keep you warm. There won't be anything left. So there was something that you could really touch with them with these kids. This is harder. This is harder because all you need is for Kinder Morgan to come in and say, oh emitting CO2, that's what's in your cola, no big deal. And they don't get it. They don't get it. So the educational process is much more difficult I think with this.
- And there probably will be, when the draft EIS comes out, if we can get people who really know stuff and can interpret it, good opportunities to get that information disseminated. Because they'll say a lot of things in there [in the DEIS] that can be refuted.

## **Focus Group B**

### **Theme: Culture and Connection to Land**

#### **A1: Sacredness of land / ancestral sites**

Participants stressed that land grant families have lived continuously in the area for generations spanning centuries, since the beginning of human settlement in New Mexico. On several occasions, participants asserted that the “ruins” and “monuments” in the area were still active sites of worship and tradition for land grant families, and that even well-intentioned attempts to preserve “archaeological” sites and unearth pueblos for scientific curiosity desecrated ancestral human remains. There is concern that the pipeline would unearth and destroy many of the artifacts and remains in the region.

- Well, I come from the little pueblo of Abó, Abó Viejo. And it's right next to the Salinas pueblo missions, the Abó unit. And of course, the Abó unit, which is the ruins, at one time belonged to the Sisneros [a land grant family]. And in the Pueblo de Abó is a spring and that was used by the Indians in the 1100s. And it's still being used by the Sisneros.
- I'm proud of my heritage [as a land grant heir with Native American ancestry]. But, you need to know that our people have been here since the beginning of human time here, which is looking like it's 11,000, 13,000 years since we've been here. We followed the river. But, that's who we are. Even though we don't have a tribal designate.
- When the railroad came in, so did the Park Service. Those [the Salinas Pueblo National Monuments] are churches. They're not state parks. They're churches. And they're holy to us.
- I went to Abó about a year and a half ago to an archeological summit. And they were showing slides of how they found skeletons in graveyards of the missions. And then they just have them propped up there. And frankly, it broke my heart because those are my relatives. Those are my ancestors. They didn't realize we're not an extinct species. The way that President Roosevelt stole all that land, let's call it the way it is, Roosevelt is one of my favorite presidents, they stole it by using the Antiquities Act. Antiquities Act is an act saying that there are no human beings who inhabit this land, there are no tribal people, we're the people. We're the majority here in New Mexico. We're going to be the majority in Texas pretty soon, we're going to be the majority in California, we're going to be the majority in Arizona, we're going to be the majority in Colorado. And guess what? Those are all areas belonging to Nueva España. Those are our people.
- Every summer, we have a gathering of people, the nun [the historical/religious figure of the Lady in Blue, María de Agreda] that came through here years ago. La Monja Azul. Well, we're having masses on each site that was impacted by them. And also, you said about the bones that were picked up and stuff like that, those are holy lands, I mean, they're burial sites all over the place. And what are they going to do? Just run them over, throw them to the side and say hey, it's just another bone, throw it? The holy places, I talked to Isleta, the Indians, and that was one of the biggest things that they were talking about. They haven't gotten back to me, but they were doing some research on their own. But, our people are buried all over.
- The thing is that they right now there's so many pueblos out there that we don't even know about and if they're going to start digging they're going to start digging pueblos. They're going to start digging historical sites. And even right now, if we're going to do anything in our land, if we're going to dig for a cesspool or we're going to dig for whatever, we have to ask for permission because there might be a historical site. I mean, it is a historical site which we might be digging something. And yet, they're going

to come in and they're just going to come in with their bulldozers and they don't care what there is. They're ruining everything. They don't care. And there's no ties to the land except that they want to rip it up. The almighty dollar. That's my thought. I think they don't have respect. Respect is the word. They have no respect for what culture is, what tradition is and what is sacred, bottom line. Well, there's nothing sacred to them. Nothing is sacred except the dollar.

#### A2: Stewardship over land

Participants regarded themselves as stewards over the land, overseeing its maintenance and health. Some participants expressed disappointment with the state of the land in the hands of the Park Service and the Bureau of Land Management, which puts the environment in a state of vulnerability to fire and floods, and prevents the community from benefitting from the land, while granting the land to other entities (such as Kinder Morgan) for exploitation. Many participants emphatically expressed that the pipeline would ruin their land, and that they would do whatever was in their power to keep the pipeline off the land. Several participants called for the honoring of the Treaty of Guadalupe Hidalgo, in which Mexico ceded much of the present-day western United States on the condition (among others) that the sovereignty of land grant families be respected. [see this section and other quotes with the A2 code tag throughout]

- I'm very disappointed because the land has not been taken care of as the way that they were supposed to have taken care of it. The arroyos are overgrown. I know that they say the 100 year floods. One of these days we're going to have it. And the little town of Abó, my house and probably the ruins- and everything else are going to be gone because of that overgrowth in those arroyos. It's going to back up and we're going to have a big flood and we're going to be gone. And they don't want to do anything about it. There it is. Our wells are going dry.
- I think one of the approaches to make when they come and say you got to honor the land, the people that own the land, that originally owned the land. And honor the treaty of Guadalupe Hidalgo. You haven't gone to the grant and you ask permission to be in their land so you're hereby denied until you go to the board and then the board will deny them over there, too.

#### A3: Natural beauty

Participants valued the natural beauty of the land, and are concerned that further development would detract from that natural beauty by industrializing the landscape and allowing industrial development to continue unchecked.

- The other thing is I have is the view. What more beautiful view? Why do you think we live here? Look at the views that we have. What a vista. And they come now and they put all those red lights and everything is disrupting our beauty, our simplicity.
- I think the environmental landscape is going to be affected because it's going to look ugly. Bottom line, it's an ugly thing. All those pipes that you already see, they're ugly. They're disturbing just like those lights. I used to be able to open my bedroom window and look out. I see those papalotes of electricity every night. I hate them. I hate them. What else? They come and they disturb the air, the water, anything that they can disturb they disturb it. And Kinder Morgan is disturbing. They're going to disturb everything. We have such a beautiful view. I don't care where you drive north New Mexico, southern, deserts, mountains, valleys and coming up that highway 66, 60

whatever it is, I forgot what it is , it's highway 60, 66 over there. But, coming up 60 I already see demolishing. Demolishing stuff. So, I think the landscape is being disturbed a whole lot.

#### A4: Identity / way of life

Participants shared information about the way of life of land grant communities, including the millennia of history of settlement in the area (extending to pre-colonial times due to the indigenous roots of many land grant residents), the land grant communities' treaty rights, and the cultural practices of the land grant families, including their interactions and subsistence on the natural environment.

- I'm going to share something with you guys and it's documented. In the early 1700s settlers in the Manzano area established themselves in the communities of Abó, Quarai, Punta de Agua, Cañón Colorado and El Chato consisting of 180 families. What you see here is the existing generation of today and the future. We, as land grant people, have been here for over 300 years and as Native Americans for over 2,500 years which is my father's ancestry before colonial times. The 180 settlers' boundaries were from north to south being from Torreon old mission of Abó and from east to west from the table land, the mesa, called the Jumanos, to the mountain. All of which were and are to be used for pasture grounds and other common purposes. That could be anything that we use it for, common purposes, eating, drinking, whatever.
- My father was Native American. His ancestors were native, so when the Homestead Act came they were already residing in those areas of Abó. And what my great-grandfather had to do was apply for land when he already owned it.
- In our Spanish culture, in our Indian culture, tenemos familias grandes, have big families. You're too busy taking care of your families. You can't be at meetings or be at all these festivals that are going on because you have family to take care of. It's not that they don't want to get involved. In my family alone, by the time que voy to the baptisms, the confirmations and the weddings and everything else for my sisters, no salgo de ahí, no salgo. Can you imagine all the things I have to go? I don't need a social life. I have my social life.

#### Theme: Land use

##### B1: Industry/utilities

Participants expressed concern that industrial development would go unchecked if the pipeline is allowed, and that residents would be essentially ceding control to developers. They also disapproved strongly of the use of eminent domain for a project that is unlikely to benefit the local community.

- And the thing is, too, is that this pipeline is going through. It's not going to benefit us at all because wherever this pipeline is going it's not benefiting anything in here. They're just going to ruin our land and they're going to go someplace else and we just don't want it.
- Once they get the easement then they can probably do whatever they want down the road. They can rent it to another company. Bring other things down. They have plans.
- Kinder Morgan will condemn your land and they'll take it. They condemn it. Well, if they go to eminent domain they can. But, I don't know that they can go through eminent domain. If they're going to make money off of this. Because the way I understand eminent domain is it's supposed to help the community, the country. The railroad is a prime example. That's a good characteristic there because they supply everybody in the

nation, not everybody, but I mean, the railroad there is a majority of our goods. Now, they [the railroad] have a case for eminent domain. The way that Kinder Morgan has is its pocketbook.

## B2: Self-sustainability

Participants expressed that they subsist off the land, and that the land provides them with everything that is needed to live, thrive and be self-sustaining, even when the outside world is experiencing economic problems. This sustainability is dependent on good stewardship practices over the land, and this gives land grant communities a different conception than other cultures about the meaning of wealth, and therefore what can be bought and sold and compensated for with money. This self-sustainability is also based on social cohesion and strong community ties, and tied to land grant communities' indigenous and Spanish heritage.

- I'm a gardener, I'm an organic gardener. We have organic license in our family. Our nephews and nieces have carried the organic license in our family. We have gardens up in the mountains. The land that they want to run through over here to our property, they've put a tank there that says organic garden. We are gardeners. We believe in organic, everything fresh from our Earth. Okay. If the CO<sub>2</sub> pipeline goes through there they're going to destroy it. The land gives us everything we need. They give us our mud to make adobes, they give us our plants so we can eat. Everything that Mother Earth gives us we have it. We've been blessed with it. That's how we live. We have it all.
- And it has to do with how the media or the American media portrays us. They want to portray us a bunch of people that are on welfare, we can't do anything for ourselves. We're not worthy to live on this land. But, I want to tell you during the Great Depression in Manzano, Punta de Agua, we didn't even know there was a depression. We had extra beans and corn. In fact, my grandfather gave sacks of beans to some of the poor Anglo farmers over there by Dewey that overgrazed and they put too many crops on the land, they didn't rotate. We saved them. We were the productive ones. We were self-reliant. We didn't take no welfare. We took care of ourselves.
- And also the richness of the white people is totally a different word that we inherit as rich, rich with land, rich with food, rich with God. That's our richness, that's all we have. That's all we can share is our Catholicism and our heritage, our culture. That's it. That's our richness for us.

## B3: Ranching/farming - n/a

### Theme: Economic vitality

#### C1: Jobs/income

Many participants cited the false promises made by previous developers about the economic benefits of their projects to land grant communities, and all have fallen well short of those promises. In many instances, the benefits promised were benefits that should have rightfully belonged to land grant communities to begin with due to their treaty rights. The younger generation of land grant community members feels they may benefit from jobs brought by the pipeline, but participants felt that the actual jobs created locally and permanently would be minimal. While participants reiterated that the land grant community's concept of wealth extends beyond money alone, and that money was a poor substitute for liberty and stewardship over the land, some participants also expressed that if the pipeline goes through, the land grant community must receive good compensation for this.

- One of the first subdivisions came into Torrance County many years ago. I mean, the buzz was all over Torrance County. Man, Torrance County's going to be swimming in money because of the subdivision. Guess what people? They lied. Nothing. And some of these people that are for the pipeline are getting a carrot on a stick and they're holding a dollar bill in front of their nose and saying guess what? You're going to be rich. Well, you know what, what is richness? Richness to me is being able to go to my property and sitting down wherever I want to, okay, looking around, pick a weed, cut a tree, whatever I want to. I don't want no scars on my property. My grandfather homesteaded it. His ancestors were there before the government was there, before the Forest Service, before the national park, before anybody. So, now they want to take that privilege away from us because they want to take this CO<sub>2</sub> to Texas. No. And that is wrong.
- The pipeline tells people—Like, the younger generation, because you know the younger generation does Facebook. And I was talking to some of the younger girls, they go: I put it on Facebook about the pipeline going through. And the kids responded to her: “How nice, then we'll get jobs. And we'll have good paying jobs.” And I thought, whoa, see a different thinking. The younger generation thinks this will be money for them. They'll promise them jobs for probably two weeks and after that, what? It's gone. Better a slow nickel than a fast dime. Let me tell you, it's tricky. Because these kids, they're barely making it, and then they kind of trick them, there's going to be money coming through and then they don't hire them because they're going to bring the people from back wherever they want to bring them that are qualified to run all this stuff.
- It's not going to benefit anybody in here. I mean, if they go through my property they're going to be \$2,000, one time deal. Then the land is scarred. Then he has to worry is the damn thing going to blow up. Okay? And that's stress for the community, that's stress for a lot of people who worry about it.
- Either way, if they want it, that's part of our land here. We need to get some money. I think we need to get money, we need to make sure when it goes through our county taxes that where is that money going to. We need to log that we want a certain percent of that money.

#### C2: Tourism/taxes

One participant pointed out that the county would receive payment in lieu of taxes on the pipeline.

- [re: Torrance County benefitting from the pipeline.] I think they'll get a PILT, or a payment in lieu of taxes.

#### C3: Traditional livelihoods - n/a

#### C4: Property value / insurance - n/a

#### C5: Pipeline maintenance - n/a

### Theme: General health

#### D1: Mental health

Participants expressed that the feelings of marginalization and the attempts to silence them is causing stress and anger in their community, and pitting neighbor against neighbor, as well as taking time away from activities that promote mental health, such as spending time with family and gardening.



- The music. I play the guitarra. My sister plays guitar. We tell stories. My stories have become more emotional, more aggressive. My songs have become more--because I write stories and songs. I'm angry. I'm writing the songs of my family. My children can keep those songs, how we fought for our land. And we keep saying the same story over and over and over and yet, if I want to do a presentation--oh Ms. Romero, don't say that. Don't be angry, don't be this. Don't tell me what to do. I'm angry if I want to. I have a right to be. It's not based on emotions is what they said. It's not. Yeah, it's not based on emotions, it's based on directed questions. I said really? Really, you got to be kidding me.
- And on that point, this is causing some things, like a mental health issue, it's causing neighbor against neighbor.
- The stress of the communities, it's stealing. It's stressful. I could be home watering my garden right now. You know what it's costing into my time. You know how many hours I have put into these meetings? And Kinder Morgan has still not spoken to us. I spent more time, I could be in my garden over there. I could be doing my music, I could be doing something else. It's taking my personal, private time with my family, my grandkids, everybody.

## D2: Social health

Participants noted the importance of family ties on the social health of land grant communities. [see other quotes tagged with the D2 code]

- That's the difference between the Hispanic and some of the white people. Some of the white people have big families, too. But, we're really united. We are really tight. I mean, it doesn't mean that we're perfect. We argue. You go work, you don't have work, you have too much work, you have more money than me. Whatever, it's just family. But, you know what, we're all together, we support each other. And I think that this pipeline has disturbed that. It distances us. In the very beginning that it started it has disturbed our mind, our soul, our spirit, you name it. It's disturbing, very disturbing.

## D3: Physical health - n/a

### Theme: Safety

#### E1: Explosions/ruptures/leaks

Participants expressed concerns over the potential for pipeline failures, and the impacts this would have on water and livestock. Participants also expressed that while Kinder Morgan claims CO<sub>2</sub> is not as dangerous as other piped substances, there are serious consequences to a leak, including to human lives directly and indirectly through contamination of water, or due to other disasters, such as sinkholes.

- The issue of CO<sub>2</sub> is [sarcastically] oh, that's just carbon dioxide. I was doing some research. And it had to do with Apollo 13. Remember, Houston, we have a problem here?. Well, what was killing the astronauts was guess what? A buildup of CO<sub>2</sub>. And it was just low levels that was killing them. They had to get a filter from the other spaceship. They survived, but it's just a little bit of CO<sub>2</sub> would have killed those three astronauts, CO<sub>2</sub>. [...] That's happening to our animals. [Probable intended meaning: That will happen to our animals if the pipeline is built.]
- See, because right now they're having to redo a lot of the pipelines. I'm sure you're probably aware of this. They're coming out of Canada, the welds weren't good enough.

So, they have to tear them up and redo them. And these pipelines were carrying chemicals. So, whether that will happen here I don't know, but it's a possibility and so I think one of the things that people need to be aware of is the dangers of CO<sub>2</sub> when it gets into the water tables and atmosphere and whatever. What's it going to do to the humans and the environment and everything else?

- If, hypothetically, something breaks, if they ruin our wells, whatever, how are you going to live? I don't want to move.
- I lived next to a pipeline on the west mesa west of Lynn, one time there was a blow out. Let me tell you what, I thought a jet had crashed next to my house. We were a half a mile from that thing when that thing blew. I mean, it shook everything, it scared the tar out of us, but anyway, so I don't know what this thing that CO<sub>2</sub> is going to do. Okay, besides kill us if we get close to it. They're going to take the oxygen away. Kill my animals and everything else. So, let's keep it away.

## E2: Emergency response capacity - n/a

### Theme: Water

#### F1: Access/Quality

Participants pointed out that settlement patterns in the area have been influenced primarily due to water availability. They stressed the immense value of water, due to its impact on survivability, and concern that the pipeline would contaminate the water or cause a shortage of water.

- But that spring has brought all of the communities in the surrounding areas [together] because anything on one side of the arroyo [the water on one side of the arroyo is very good] and if you go to the other side of the arroyo the water is not very good. But in Abó the water has always been good. And so, people would come there to get water. In 1909 the railroad went in there and they got the water and they used the water for many, many years so that they could take it to Scholle. And they used it on the steam engines.
- If the water wasn't there, the Pueblos wouldn't have survived. And so, there it is. The Indians survived on it and we survived on it and our kids are going to survive on it and it's going to be impacted. And we don't want that.
- If Kinder Morgan starts drilling near our wells, drilling around or blowing from the air, whatever they're going to do, they're going to cause fracturing. It's going to break our water. I hate to see any of our neighbors without water. It's happening right now. I hear it all around. That water is sacred to us.
- And if someone were to offer me an oil well, a gold mine, they can keep it. I want my property the way it is and my water because that's survivability. I can't drink oil and I can't chew gold. Although, I have gold teeth, but anyway, but with water you can survive. And I don't want what my ancestors worked so hard to try to keep when the government came through and told them you have to go sign this homestead even though you've lived here 200 or 300 years, but you still have to do the homestead. And what they worked so hard to keep, my grandfather, my mom, my dad, now myself I'm fighting for the same thing that they fought. And we want to keep what we have. We don't want any intruders. I mean, I'm sorry that's just the way it is. They're intruding on our space. They don't care what they ruined or whose life they ruin. Okay. And so, Kinder Morgan if they can't be stopped they need to be rerouted.

- The first big issue here is our water because I don't see anybody here that looks like a camel that can survive seven days without water or that can live without water. Okay. To me, that's a priority. That's priority one. Okay. Everything else follows. The historical, the cultural, our land, the remedios, everything.

### **Theme: Environment**

#### **G1: Air/Soil/Wildlife/Climate**

Participants compared the pipeline to other historical environmental injustices, such as the killing off of buffalo to “quell the Natives.” One resident stressed that deforestation and thinning would lead to erosion, and the discarded brush would contribute to fires.

- My mom tells a story that was told to her by dad that my great grandpa, they would go hunt buffalo east of the salt lakes . And they would call it el monte que se mueve. It's the forest that moves because there were so many buffalo that you're looking at it. Man, that's a forest. All of a sudden the forest starts moving. Guess what? It was nothing but buffalo. And of course, they lived off that. You're right, I mean, nothing else. And then for them just to come in, the government, to come in and slaughter them for no reason just to quell the Natives.
- And the thing is, someone always come in and tells you something that has a legal dollar sign in it. And they say oh, we need to thin those junipers because they suck up all the water. I go yeah, you know what causes erosion? Water. The monte is going to become desmonte. That's what it's going to be. Too much thinning and we think oh, these people are educated. They know what they're doing. Ten more years from now we're going to have erosion everywhere because too much desmonte, too much thinning, too much cutting. Come on, have a good plan. I've seen plans that are disturbing up in those mountains. I've gone up there to visit them and it's piled up and piled up of brush and debris that could cause that whole forest to burn.

### **Theme: Equity / Ethics**

#### **H1: Historical trauma**

Participants linked the pipeline to previous, historically traumatic experiences of indigenous people and land grant communities, including the building of a railroad, the acquisition of culturally important land by the National Park Service, the violation of land grant sovereignty guaranteed in the Treaty of Guadalupe Hidalgo, the slaughter of buffalo, past economic development projects that promised economic prosperity, and past mistreatment of indigenous people by the school system [see other quotes with the H1 code tag].

- I think there is a correlation here specifically with the railroad . And in many ways this pipeline coming through is the railroad all over again where a major corporation coming through and basically just taking everybody's land, changing the cultural identity of this area. This one thing is just a repeat of all that.
- That's one thing that even the Park Service when they first started that they were going to acquire the land in Abó and Quarai. What they put in their reports was that the land was not good for anything except scorpions. That that was the only thing that was in that land, scorpions, and God darn it I've never seen one scorpion yet. And I've lived there I don't know how many years.

- I wrote a letter to the BLM because they say we should input information to them. And I stated there that one of the things that needed to be addressed was to go to the Land Grant Board and see how they feel about that because they're impacting land grant territory. I also wrote a letter we don't occupy the land, the heirs don't occupy. A lot of it was taken away either through the Homestead Act or some other illegal means and a lot of people that are not native to the area are in possession of the property. That right now is not an issue. The forest belongs to the land grant. Right now, the government took it from the people. So, they need to go because when they signed the treaty those are awarded to us through the Treaty of Guadalupe Hidalgo. And the government should honor that. And anybody that goes through there should go the Board and ask them do you want us there or not. And they haven't done that. And that was one of my big concerns when I wrote that letter to the BLM. And I still feel strongly that they should do that. If not, I think that's one of the avenues that the land grant should take is take it to Congress or take them whenever and tell them hey, we want our rights honored.
- By the time the Manzaneros thought to confirm their land grant with the US Court of Private Land Claims in 1898 they were so confused by the new system and that's what's happening again. A new system, a new vocabulary, a new language, a new whatever you want to call it that we have to educate ourselves and we're not lawyers. And I'm not a lawyer, but we have to become common with their language. Kinder Morgan has a language that's very tricky and so does the BLM, very tricky. Anyways, a new system of language you what I mean. New government and new language to the native people which is us. Every time they throw us with this new language.
- Our people found themselves desperately defending the very minimum that they have. President Theodore Roosevelt recognized the right of the community land grant to 70,360 acres. And we now here 300 years later again defending ourselves with very minimal support from our government. Again, we're here with minimal support. I don't see anybody defending us that is high up there in offices of the government or anybody. It seems like they barely are hearing about it. And that's pretty pathetic, I think. It's pathetic. They should be here, they should be defending us. This is our land. They know its historical sites, they know that it's land grant. We're here fighting, puny people fighting again like our people did a long time ago. So, we're defending ourselves with minimal support from our government.

## H2: Marginalization <> empowerment

Participants cited a long history of marginalization of indigenous and land grant communities, and the use of money by special interests to marginalize poor and minority communities that they believe do not have the power to fight back. Some participants expressed that they felt powerless over their situation because they weren't elected officials nor did they wield any official authority. On the other hand, participants stressed that with Latinos as a growing majority, their political power is growing and, if mobilized, special interests can no longer easily overcome the community's will or use eminent domain as a justification for condemning land, especially if the Latino and indigenous community united

- Actually when we [the Manzano Merced residents descended from Native Americans] did [have a tribal designation], I'll use the example of Abiquiú. Abiquiú knew that they were mostly Indian, about 80% Indian, but they told the American government that they were Spanish. The reason for that is because, if you said you were Indian, they would take your kids, steal your kids, break your family and take them off to the Gallup Indian

School, Albuquerque Indian School, Santa Fe Indian School, Haskell Indian School, Carlisle Indian School. That's why we have to say that we're Spanish, even though a lot of us were indigenous. So, it's not just because we're Mexicans who just crossed the border, that's how they're going to try to tag us. We were here at the very beginning.

- Actually, the people didn't cross the border, the border crossed us. Because we were here before. For example, in Manzano, people were pretty smart. They came over here. They had the priests come probably once a year to baptize people in Manzano, and people from Abó - Mountainair wasn't Mountainair, it was Monte Alto. It was a little town by the name of Monte Alto here. Willard didn't exist, it was Progreso. And this town came after the railroad came through. Then they came and they changed the names. And they tried to, when we were going to school here, steal our language. They would hit us on the hands if we spoke Spanish. They would. And so, we survived. We're proud of who we are, and like Danny says, we are Indians. My family is Apache. How much I got, I don't know. But, we are, and Spanish. We are a mixture of both.
- That's who we are. And this state, the pipeline that they want to run through, it's just money against poor people. It's what it amounts. And what they need to do is run that pipeline where they have the easement already. And that's really what needs to be done. One thing that wasn't addressed also is what happens if there's an earthquake and there's a fault right there in Belen that goes right through the river.
- In 1877 a surveyor contracted by the US Surveyor General office established the Land Grant's farm and ranch lands as those being from the Pino de la Virgen in the serra the cornfields extending a league in each direction. If you know the measurement of a league I don't have to explain it, with the natural boundaries being two solitary cedars on the north, the mesa, Colorado on the east and the height of the Arroyo de Ciénega on the south. And the summit of the hill on the west, the summit, meaning the Manzano mountains. In 1898 the US government denied the community's rights to some 10,000 right off the bat. In less than 20 years our lands had gone from 40,000 acres to a little more than 17,000 acres to 8,000 acres.
- Pipeline to CO2 is not wanted here. We will fight again to defend Mother Earth. Do not break her, do not open her, do not touch her with your trenches and chemicals. That's basically it. You're going to ruin everything. They're already starting to ruin our mentality, our spirituality, our emotions. Everything is involved here.
- It's like a sovereignty. It's sovereign to us, it's ours. We govern our own lands. I mean, our own little acres or whatever. They're sovereign to us. That's the word for it. And we as people we don't really have a leader. We have a governor and a government, but you know what, we don't have a leader. We don't have a Tejerina. We don't have a Cesar Chavez. We don't have anybody like that. He's a leader. We're individual, but we're puny people. And our voices are not because we don't have a title of something our voices are not being heard. And they're not going to get heard because I am not the governor. I'm not the BLM or I'm not a part of this. We're Manzaneros and Punta de Aguas and whatever Abó, Monte Alto. We just have a little bit of knowledge that our parents gave us. Not even through school because this was not in school. Land grants were not in school. Nothing, this is what my father gave me. Bottom line, this is the education from my father. That's all I have and my education from my church.
- I love quotes. And I use this one a lot, this is Mandela, he says "When a man is denied the right to live the life he believes in he has no choice but to become an outlaw." And that's what I'm becoming. That's the way I feel right now. I feel like an outlaw. I feel like I'm angry and I'm not an angry person, but I feel like I have to put that sense into

everything now. Everything I say, everything that's talked about my anger comes out and maybe it's a gift. And we're all angry and I think we have to learn how to use it properly and appropriately or however, but, you know what, sometimes I feel I'm not appropriate.

### H3: Social responsibility

Participants expressed a concern for the future of their land and their families if the pipeline is built, and also felt that stopping the pipeline had implications beyond the land grant community, and that even if the pipeline is routed elsewhere, other communities would be affected. [see other quotes tagged with the H3 code]

- And it's not going to be probably an impact on me because I'll probably be gone, but it will be an impact on our children and their children and that's what we're working on.
- Our future is in jeopardy. Right now, they're young, they think oh, the world, but you know what, sooner or later they're going to say is there a little piece of land over here?
- We're in this together. We're not going to do this "not in my backyard." Even if you push the pipeline over there it still affects us. It's still our backyard. It's still part of the ecosystem, so we have to come from a position of when you affect one of us you are going to affect all of us.

## Theme: Recommendations

### I1: Alternatives / Mitigations

Participants preferred that the pipeline not be built anywhere. However, if the pipeline must be built, they preferred routes that either took it outside of New Mexico altogether, or routed along existing industrial right-of-ways. An alternate plan is to require so much compensation for potential future risks so as to make the cost of construction prohibitive.

- No "not in my backyard," NIMBY, not in my backyard, not in nobody's backyard here. It's not NIMBY no more. That NIMBY was an old thing, not in my backyard, not in none of our backyards.
- Kinder Morgan from what I understand owns El Paso Natural Gas and they can go on that line. The only reason that I can, from what I've read, is it's a lot cheaper to run it this way for the simple reason that they don't have to put an extra 100, 200 miles of pipeline. You know what, that's not our problem. If they want to run the pipeline, put it on their own easement. Don't bring it down our throats.
- You have Arizona, all right, and then we have New Mexico. There's that little Gadsden Purchase. And then there's Texas, right. I think you want to know this kind of thing. Why can't Arizona go on their land in Arizona all the way down here by the border? That's all border and BLM, government land, okay. Just keep on going. And there's Texas. We say we appreciate that Texas is being what Texas is. All right. And Arizona is Arizona. We want to stay the way we are and the way we were. Go around. It's like a big saddle. Go around.
- You have to have plan A. Plan A, simple, triangle, no pipeline, X it out. That's number one. No pipeline. But, you know how everything is and we're down here in the totem pole, government, blah, blah, we're down here. In reality, they come through, we have to have a plan B we're going to say you know what, when you come through here I better make sure that my community has enough money in this pocket. I mean, millions of dollars in this pocket to provide for our communities and for our youth. Because you

know what, we have to tie them in. If we don't tie them in, we lose everything, we're not going to get a penny. They're going to give taxes to the county. Where are those taxes going to go? I don't know. But we need to have a plan B. What's our plan B? If they go through here we don't want it. No, hope they don't go through. But, if they go through here, we got to talk with money, money talks.

- We have to have a youth community for our center [a youth center for our community] and have them give us millions and millions of dollars. We have to put the price so high that they're going to go around through Arizona and Texas.
- Well, that's the thing that my plan B is it goes down the other right-of-way. That's my plan B. Plan C God forbid is they come through here, but then okay, they have to come through here. If they want to ruin my water where do I go? Okay, Kinder Morgan, need to put \$2 billion or \$3 billion in an escrow account. Because we may need to pipe water out of San Diego Bay. I don't know, Gulf of Mexico.
- I think there's a possibility, I don't know if lawyers are going to have to deal with this, but you got to sell a piece of land instead of before they take it from you, say okay, I'll sell it to you for whatever, \$1 million a square foot or whatever it is. But, I think there's something to that. I think I read something about that where people when they're running those pipelines back East were spending an astronomical amount of money for the land. But, they do, they make a detour and go the other way.

### **Theme: Marginalization/oppression**

#### **J1: Symbolic/structural violence - n/a**

#### **J2: Critical consciousness**

Participants felt that it was important to involve the rest of the community in resisting the pipeline, either in person or through petitions and educating people about the pipeline.

- Since Mountainair is about 75% Spanish how do we get the rest of the people involved? I think that would be a big issue if somebody can come up with that answer. Get them show up to the meeting and tell them, hey, this is who we are and we want you to listen to us. You're going to our historical lands. I think the only way we can do it is we're going to get a petition and they have to sign it because they're not public people. They don't know what to say. They probably don't even want to be come forward. But, their signature is very valuable. But, we have to come up with a petition that is going to say that and we ourselves are going to have to be the speaker to those people and then they just have to sign it, bottom line.
- Well, a lot of it is like you just said a while ago, it's a new language. And our people are afraid of the new language. They're not used to talking to the government. They're not used to it. And when our people meet up to a police or a lawyer they're scared. I'm not. I could care less. Really, I'm not because I know. But, they are. But, if we have to speak and bring them like we had talked about I could do Abó and she can go to the Manzano and we could say this is our people. These are the signatures. Then maybe that would help, too. But, it's going to take a lot of legwork. But, we're used to it. That's how we would do.
- But, I think that needs to get out to the community. It's a point that was I was trying to make. Let the people know that if something does happen, if it does go through here, this is the effects that will happen to the population.

## Appendix B. Economic Vitality

Table B-1. 2013 Employment and Wage Annual Average for Selected Industries in Torrance County<sup>1</sup>

	Average Employment	Average Annual Wages Per Employee	Percentage of all jobs
All	3165	\$31,396	100%
Federal Government	73	\$46,905	2%
State Government	65	\$43,500	2%
Local Government	904	\$31,636	29%
Service-Providing	857	Not available	27%
Education and Health Services	708	\$33,347	22%
Public Administration	139	\$27,210	4%
Private	2123	\$30,387	67%
Goods-Producing	407	\$29,712	13%
Natural resources and mining	147	\$24,851	5%
Crop Production	76	\$16,642	2%
Beef Cattle Ranching and Farming	15	\$24,047	0.5%
Construction	134	\$32,262	4%
Manufacturing	126	\$32,669	4%
Service-Providing	1716	\$30,548	54%
Trade, transportation, and utilities	780	\$34,605	25%
Wholesale Trade	146	\$64,384	5%
Retail Trade	493	\$22,274	16%
Information	23	\$32,091	1%
Financial activities	45	\$31,512	1%
Professional and business services	248	\$43,152	8%
Education and health services	329	\$25,551	10%
Leisure and hospitality	256	\$11,938	8%
Other services	33	\$31,531	1%



Table B-2. The top 10 counties where workers living in Torrance County were employed, 2011.<sup>2</sup>

	Count	Share
Bernalillo County, NM	1,901	45.0%
Torrance County, NM	816	19.3%
Sandoval County, NM	195	4.6%
Santa Fe County, NM	184	4.4%
Valencia County, NM	173	4.1%
Cibola County, NM	107	2.5%
Doña Ana County, NM	98	2.3%
McKinley County, NM	62	1.5%
Otero County, NM	62	1.5%
Maricopa County, AZ	46	1.1%
All Other Locations	585	13.8%

Table B-3. The top 10 cities and places where workers living in Torrance County were employed, 2011.<sup>2</sup>

	Count	Share
Albuquerque city, NM	1,627	38%
Mountainair town, NM	102	2%
Rio Rancho city, NM	81	2%
Santa Fe city, NM	78	2%
Las Cruces city, NM	75	2%
Belen city, NM	65	2%
Edgewood town, NM	60	1%
North Valley CDP, NM	60	1%
Grants city, NM	59	1%
McIntosh CDP, NM	55	1%
All Other Locations	1,967	47%

Table B-4. Tax revenues and total general revenues for Torrance County, 2007-2013.<sup>4,5</sup>

Fiscal Year	Property Taxes	Local and State Share Taxes	Total General Revenues*
2007	\$3,307,340	\$2,610,286	\$7,066,683
2008	\$3,558,741	\$3,059,720	\$6,665,409
2009	\$3,225,102	\$3,566,823	\$6,618,748
2010	\$3,865,319	\$2,161,886	\$6,007,990
2011	\$3,447,712	\$3,116,098	\$6,567,543
2012	\$3,757,658	\$2,294,823	\$6,387,222
2013	\$4,133,840	\$2,362,561	\$6,820,050

\*Does not include program revenues, such as charges for services. In some cases total general revenues may be lower than the sum of taxes owing to the inclusion of loss on the sale of capital assets

Table B-5. Torrance County Expenditures, 2014-2015 Operating Budget<sup>6</sup>

General Fund	
<i>Commission</i>	\$1,031,704
<i>Planning and Zoning</i>	130,828
<i>Manager</i>	188,798
<i>Admin Office Maintenance</i>	162,856
<i>Judicial Complex Maintenance</i>	75,220
<i>Community Center Maintenance</i>	8,240
<i>Clerk</i>	258,655
<i>Elections</i>	46,987
<i>Health Department Building Maintenance</i>	11,533
<i>Purchasing</i>	44,055
<i>Treasurer</i>	319,866
<i>Assessor</i>	471,096
<i>Sheriff</i>	1,279,229
<i>Finance</i>	144,777
<i>Information Technology</i>	121,977
<i>Animal Shelter</i>	131,933
<i>Probate</i>	28,153
General Fund total	4,455,905
Road Fund	1,514,487
Farm and Range Fund	39,914
Volunteer Fire Departments	744,580
Law Enforcement Protection Act Fund	29,665
Fire Pool Fund	278,939
County Fair Fund	154,050
Fire Administration Fund	81,742
Indigent Health Care	485,333
Emergency Medical Services Fund	70,107
Jail Fund	1,258,371
Environmental Gross Receipts Tax Fund	82,000
WIPP Fund	12,382
Animal Shelter Fund	6,188
General Obligation Bond Debt Service 2001	338,163
Safety Program	14,758
Civil Defense Fund	194,062
DWI Grant Program	202,635
Treasurers Fee Fund	53,522
Property Valuation Fund	216,728
Clerks Equipment Fund	25,000
Rural Primary Health Care Act Grant Fund	118,100

County Infrastructure Gross Receipts Tax Fund	200,000
DOH Community Health Council Grant FY15	5,000
Adolescent Pregnancy Prevention Grant Fund	25,000
Recycling & Illegal Dumping Grant Fund	15,000
CYFD Home Visiting Grant Fund	223,500
Esperanza Medical Clinic Fund	9,568
Senior Citizen Program Fund	1,341
Court Forfeiture Fund	9,153
Juvenile Justice Grant Fund	162,985
Debt Service Fund	220,058
Wind PILT Fund	450,800
Estancia Basin Water Board Fund	742
Rural Addressing Fund	94,929
P & Z Code Enforcement Fund	20,538
Domestic Violence Grant Fund	88,022
Domestic Violence Victim Restitution Fund	14,000
Forest Reserve Fund	136,911
Methamphetamine Initiative Grant	18,816
US Marshal Joint Law Enforcement Operations Fund	14,000
Drug Education Fund	35,000
Traffic Safety Grant Fund	6,578
Forest Service Grant	19,477
Underage Drinking Grant Fund	530
Drug Free Communities Grant Fund	24,778
NM Primary Care Association Grant Fund	40,000
ICE Inmate Care	65,000
Emergency 911 Fund	849,197
<b>Total Expenditures</b>	<b>\$13,127,554</b>

Table B-6. Summary of literature on the effects of pipelines on property values

Year	Author	Title	Geography	Type of Pipeline	Major Pipeline Accident?	Methods	Sample	Direction of Effect	Magnitude of effect			Peer Reviewed Academic Article?	Notes on author affiliation
									High	Low	Average		
1994	Kinnard et al	Natural gas pipeline impact on residential property values: an empirical study of two market areas	Connecticut & Southwestern US	Natural Gas	No	Hedonic regression	1,171 sales in Connecticut and 2,202 sales in the Southwestern US	None				No	Real Estate Counseling Group of Connecticut, report published in pipeline industry magazine Right of Way
1999	Simons	The effect of pipeline ruptures on noncontaminated residential easement-holding property in Fairfax County	Fairfax County, VA	Oil	Yes	Hedonic regression	787 sales	Negative	-5.5%	-2.6%		Yes	Cleveland State University
1999	Simons	Settlement of an oil pipeline leak with contaminated residential property: a case study	Franklin Township, OH	Oil / Others	Yes	Sale / Resale	21 sales/resales by BP and 65 sales not acquired by BP	Negative	-27.2%	0%		Yes	Cleveland State University
2001	INGAA Foundation	Natural gas pipeline impact study	Various	Natural Gas	No	Paired-sales / Matched pair	25 - 227 depending on sub-sample	None				No	Allen, Williford & Seale Inc for Interstate Natural Gas Association of America Foundation

Year	Author	Title	Geography	Type of Pipeline	Major Pipeline Accident?	Methods	Sample	Direction of Effect	Magnitude of effect			Peer Reviewed Academic Article?	Notes on author affiliation
									High	Low	Average		
2001	Simons et al	The effects of an oil pipeline rupture on single-family house prices	Prince George County, MD	Oil	Yes	Hedonic regression	2,295 sales	Negative			-11.2%	Yes	Cleveland State University
2005	Boxall et al	The impact of oil and natural gas facilities on rural residential property values: a spatial hedonic analysis	Calgary, Alberta, Canada	Natural Gas/ Oil	NO	Hedonic regression	532 sales	Negative	-3.8%	-2.5%		Yes	University of Alberta, Edmonton and Wilfrid Laurier University
2006	Hansen et al	Environmental hazards and residential property values: evidence from a major pipeline event	Bellingham, WA	Gasoline/ Crude Oil	Yes	Hedonic regression	3,765 sales	Negative	-4.6%	-0.2%		Yes	Western Washington University
2008	Fruits	Natural gas pipelines and residential property values: evidence from Clackamas and Washington Counties	Washington & Clackamas Counties, WA	Natural Gas	No	Hedonic regression	10,642 observations	None				No	ECONorthwest consulting firm for Oregon Liquid Natural Gas

Year	Author	Title	Geography	Type of Pipeline	Major Pipeline Accident?	Methods	Sample	Direction of Effect	Magnitude of effect			Peer Reviewed Academic Article?	Notes on author affiliation
									High	Low	Average		
2011	Diskin et al	The effects of natural gas pipelines on residential value	Various cities near Phoenix, AZ	Natural Gas	No	Paired-sales / Matched pair	26 - 59 matched pairs per group	None				No	Authors have various academic and private affiliations, report published in pipeline industry magazine <i>Right of Way</i>
2014	Wilde et al	A long-term study of the effect of a natural gas pipeline on residential property values	Clark County, NV	Natural Gas	No	Hedonic regression	27,647 sales	None				Yes	Gnarus Advisors LLC and Almost Convex Economics Inc, Gnarus Advisors has received funding from Kern River Gas Transmission Company on some projects

Table B-7. Annual damages for CO<sub>2</sub> pipeline accidents 1994-2014, in 2014 dollars<sup>7</sup>

Year	Number of Accidents	Operator Costs*	Public or Private Costs Reimbursed by Operator*	Total Costs
1994	3	-	-	\$81,018
1995	1	-	-	\$763
1996	3	-	-	\$49,159
1997	1	-	-	\$2,918
2000	1	-	-	\$515,931
2001	1	-	-	\$14,990
2002	5	-	-	\$25,336
2003	6	\$75,131	\$0	\$75,131
2004	3	\$93,700	\$0	\$93,700
2005	2	\$4,742	\$0	\$4,742
2006	6	\$664,822	\$71,263	\$736,085
2007	4	\$56,035	\$76,245	\$132,280
2008	7	\$12,653	\$0	\$12,653
2009	4	\$165,911	\$2,754	\$168,665
2010	6	\$222,469	\$4,265	\$226,734
2011	4	\$178,873	\$1,066	\$179,939
2012	2	\$6,068	\$0	\$6,068
2013	5	\$185,561	\$2,043	\$187,604
2014	2	\$27,610	\$0	\$27,610
<b>Total</b>	<b>66</b>	<b>\$1,693,574</b>	<b>\$157,635</b>	<b>\$2,541,324</b>

\*Reporting through 2002 did not specify operator and other costs

1. Bureau of Labor Statistics, U.S. Department of Labor. 2013 Quarterly Census of Employment and Wages: Total Covered, All Industry Aggregations, Torrance County, New Mexico Annual Averages, All Establishment Sizes.  
[http://www.bls.gov/cew/apps/table\\_maker/v1/table\\_maker.htm#type=11&year=2013&qtr=A&own=0&area=35057&supp=0&zeros=0](http://www.bls.gov/cew/apps/table_maker/v1/table_maker.htm#type=11&year=2013&qtr=A&own=0&area=35057&supp=0&zeros=0). Accessed October 3, 2014.
2. U.S. Census Bureau. OnTheMap Application. 2013. <http://onthemap.ces.census.gov/>. Accessed August 14, 2014.
3. Torrance County Planning and Zoning Department. Torrance County Zone Map. 2009.
4. Chester W. Mattocks, Certified Public Accountant. State of New Mexico County of Torrance Annual Financial Report and Independent Auditor's Report for the Year Ended June 30, 2007.  
[http://www.saonm.org/media/audits/5030\\_Torrance\\_County\\_FY2007-1\\_0.pdf](http://www.saonm.org/media/audits/5030_Torrance_County_FY2007-1_0.pdf). Accessed August 22, 2014.
5. Ricci & Company, LLC. State of New Mexico County of Torrance Financial Statements, 2008-2012.  
[http://www.saonm.org/audit\\_reports](http://www.saonm.org/audit_reports). Accessed August 22, 2014.

6. *Torrance County 2015 Operating Budget*. Torrance County, NM; 2014:1-87.  
<http://www.torrancecountynm.org/uploads/Downloads/Finance%20Department/FY2015%20Operating%20Budget.pdf>.
7. PHMSA. All-Reported Incidents (1994-2013), CO2 Hazardous Liquid Pipelines. *Pipeline Incid 20 Year Trends*. 2014. <http://www.phmsa.dot.gov/pipeline/library/datastatistics/pipelineincidenttrends>. Accessed October 30, 2014.



## Appendix C. Safety

Table C-1. Reported Accidents on the Cortez CO<sub>2</sub> pipeline<sup>1</sup>

Year	County	State	Barrels Spilled	General Cause
2002	Chaves	NM	312	Equipment
2004	Sandoval	NM	772	Equipment
2005	Eddy	NM	2394	Corrosion
2005	Santa Fe	NM	7	Equipment
2007	Montezuma	CO	98	Material And/Or Weld Failures
2008	Lea	NM	5	Material And/Or Weld Failures
2008	Lea	NM	0.4	Material And/Or Weld Failures
2008	Montezuma	CO	49	Equipment
2009	Sandoval	NM	0.1	Equipment
2012	Yoakum	TX	15.15	Incorrect Operation
2012	Yoakum	TX	3.88	Incorrect Operation

Table C-2. Kinder Morgan Pipeline Incidents 2006 - 2014<sup>1</sup>

Company Name	Miles of pipeline	Incidents	Property Damage	Gross Barrels Spilled
Kinder Morgan Altamont LLC	2	0		
Kinder Morgan CO2 CO LP	1,298	25	\$173,883	3246
Kinder Morgan Cochin	1,244	6	1,547,186	5,924
Kinder Morgan Crude and Condensate	179	1	\$45,679	4
Kinder Morgan Liquid Terminals LLC	54	78	\$55,342,558	15,501
Kinder Morgan Louisiana Pipeline LLC	136	0	\$0	0
Kinder Morgan Tejas Pipeline	2,679	5	\$8,349,876	na
Kinder Morgan North Texas Pipeline	82	0	\$0	0
Kinder Morgan Texas Pipeline	1,866	4	\$1,078,857	na
Kinder Morgan Wink Pipeline LP	456	10	\$492,409	1,045
<b>Total</b>	<b>7996</b>		<b>\$67,030,448</b>	<b>25,720</b>

Note: Companies included in this table were selected if the company name included Kinder Morgan. These estimates do not include companies that may be or have been owned by Kinder Morgan, but that do not represent the company name

Figure C-1. Number of CO<sub>2</sub> pipeline accidents, 1994-2013<sup>1</sup>

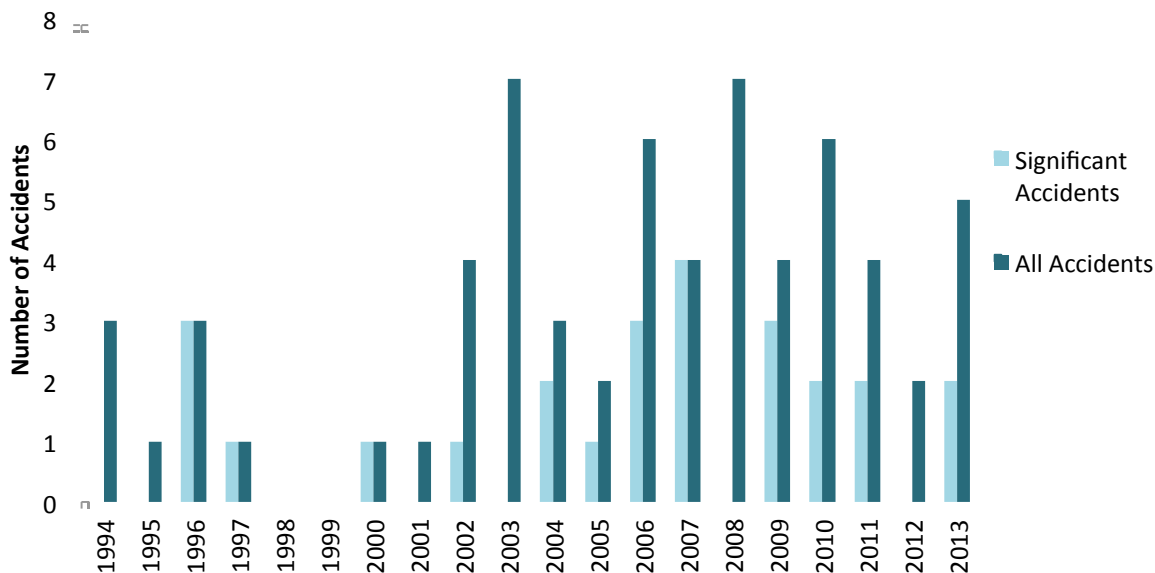


Figure C-2. Causes of CO<sub>2</sub> pipeline accidents, 1994-2013<sup>1</sup>

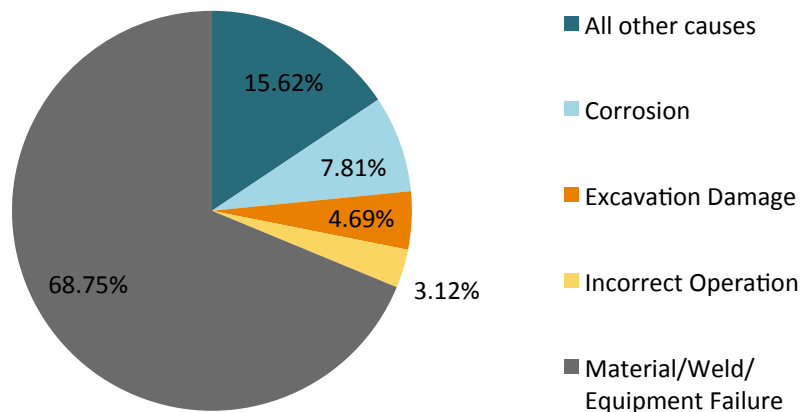


Table C-3. CO<sub>2</sub> Pipeline Accidents in the U.S., 1994 - 2013<sup>1</sup>

Year	Pipeline Mileage*	Number of Incidents	Fatalities	Injuries	Property Damage (2014 dollars)	Net Barrels Lost
1994	-	3	0	0	\$81,018	6
1995	-	1	0	0	\$763	0
1996	-	3	0	0	\$49,159	4,499
1997	-	1	0	0	\$2,918	1,159
1998	-	0	0	0	\$0	0
1999	-	0	0	0	\$0	0

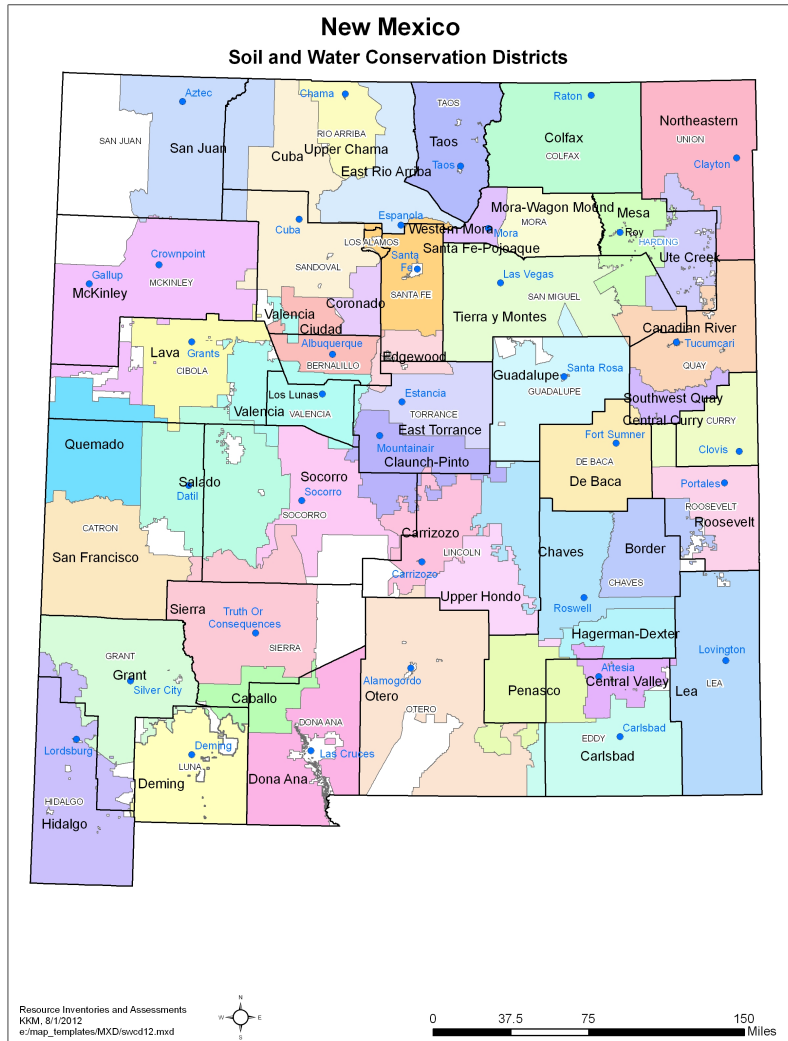
2000	-	1	0	0	\$515,931	83
2001	-	1	0	0	\$14,990	18
2002	-	4	0	0	\$16,527	317
2003	-	7	0	0	\$81,763	11
2004	3,221	3	0	0	\$93,700	8,182
2005	3,846	2	0	0	\$4,742	2,401
2006	3,827	6	0	0	\$736,085	25,086
2007	3,884	4	0	1	\$132,280	24,540
2008	4,203	7	0	0	\$12,653	103
2009	4,192	4	0	0	\$168,665	1,077
2010	4,560	6	0	0	\$231,193	0
2011	4,735	4	0	0	\$179,939	0
2012	4,840	2	0	0	\$6,068	0
2013	5,195	5	0	0	\$187,604	0
<b>Total</b>		<b>64</b>	<b>0</b>	<b>1</b>	<b>\$2,515,997</b>	<b>70,425</b>

1. PHMSA. All-Reported Incidents (1994-2013), CO2 Hazardous Liquid Pipelines. *Pipeline Incid 20 Year Trends*. 2014. <http://www.phmsa.dot.gov/pipeline/library/datastatistics/pipelineincidenttrends>. Accessed October 30, 2014.

## Appendix D. Water Quality and Availability

Figure D-1. Soil and Water Conservation Districts in New Mexico, 2012.

This map illustrates that three Soil and Water Conservation Districts – those for East Torrance, Edgewood, and Clauch-Pinto – overlap with Torrance County, which is at the center of the map shaded mostly in purple.



Source: New Mexico Association of Conservation Districts. 2012. Accessed August 1, 2014. Available at: <http://www.nmacd.org/swcds>

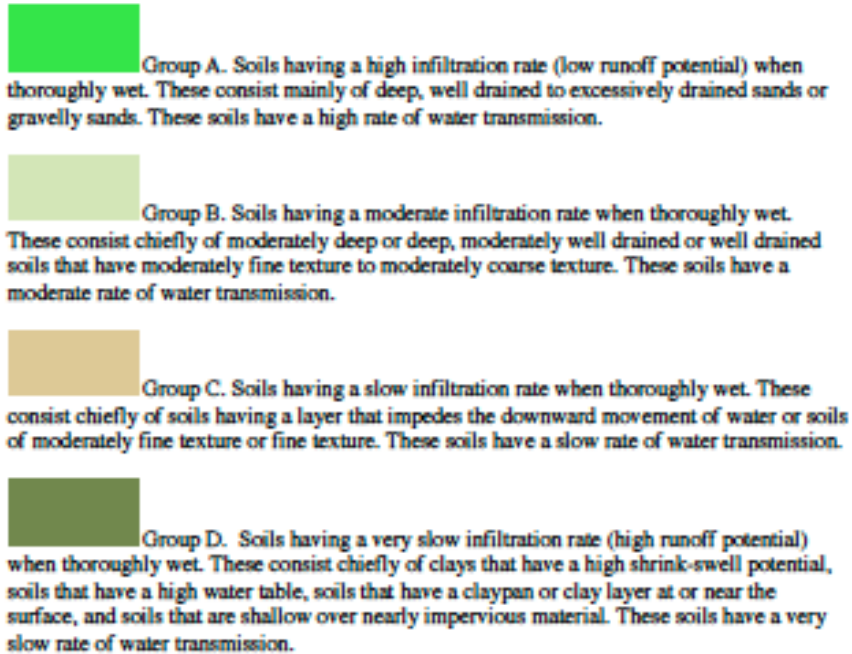
Table D-1. Estimates of Groundwater in Storage in the Estancia Basin as of 1995<sup>1</sup>

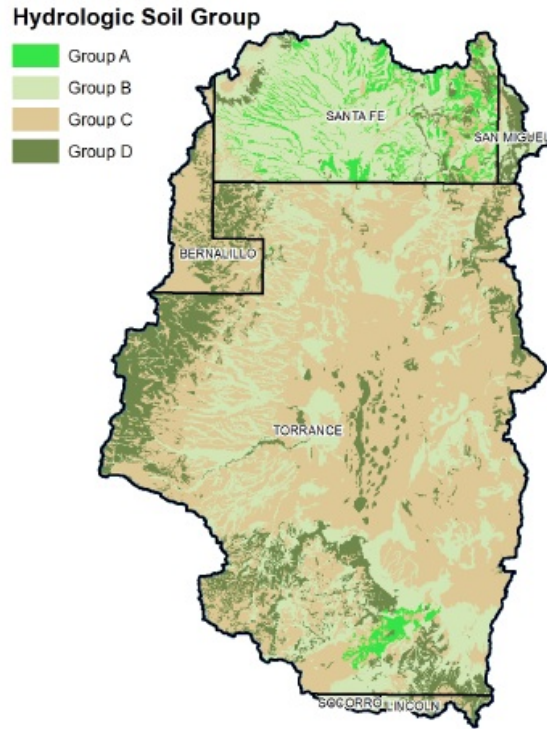
Water-Bearing Unit	Groundwater in Storage (acre-feet)
Valley Fill	6,580,000
San Andres Limestone	67,155
Glorieta Sandstone	5,854,925
Yeso Formation	23,787,357

Abo Formation	44,877,728
Madera Group	11,065,988
<b>TOTAL</b>	<b>92,233,153</b>

Source: Estancia Basin Water Planning Committee and HydroSolutions, 2010.

Figure D-2. Western Estancia Soils<sup>2</sup>





Source: US Department of Agriculture, n.d.

Figure D-3. Eastern Estancia Soils.

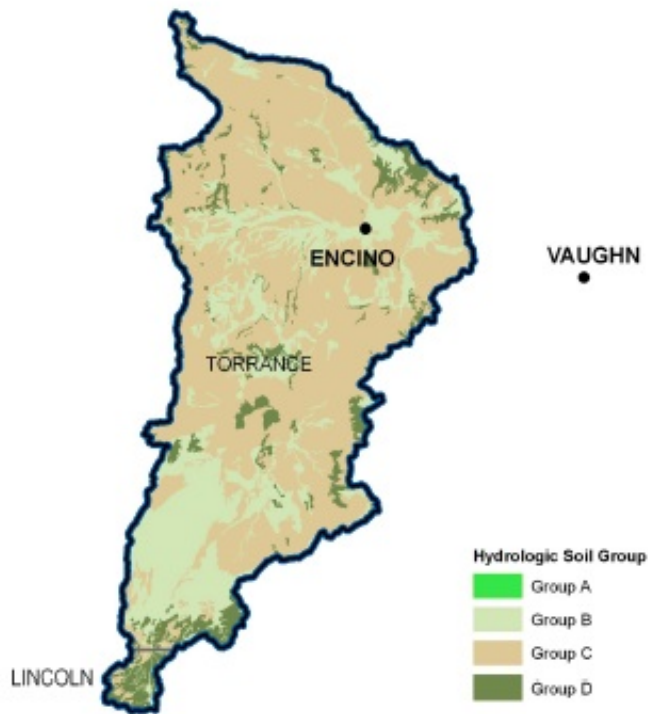


Figure 2. Hydrologic Soil Group

Source: US Department of Agriculture, n.d.

Table D-2. Water Use in Torrance County, 2010

**Summary of water use in acre-feet in Torrance County, 2010.**

CN	COUNTY	CATEGORY	WSW	WGW	TW
57	Torrance	Commercial (self-supplied)	0	276	276
57	Torrance	Domestic (self-supplied)	0	488	488
57	Torrance	Industrial (self-supplied)	0	1	1
57	Torrance	Irrigated Agriculture	0	59,605	59,605
57	Torrance	Livestock (self-supplied)	49	556	605
57	Torrance	Mining (self-supplied)	0	30	30
57	Torrance	Power (self-supplied)	0	0	0
57	Torrance	Public Water Supply	0	1,634	1,634
57	Torrance	Reservoir Evaporation	0	0	0
<b>County Totals</b>			<b>49</b>	<b>62,589</b>	<b>62,638</b>

Key: CN=county number; WSW=withdrawal, surface water; WGW=withdrawal, groundwater; TW=total withdrawal

Source: New Mexico Office of the State Engineer. Technical Reports: Summary of water use in acre-feet in Torrance County, 2010.

Table D-3. Population Served by Top 3 Active Water Systems in Torrance County, NM

Water System Name	Number of People Served	Percent of All People in the County Served by Active Water Systems
Moriarty Water System	2695	22%
Estancia Water System	2600	21%
Mountainair Water System	1608	13%
<b>TOTAL</b>	<b>6903</b>	<b>56%</b>

Source: New Mexico Department of Health. Drinking Water Branch: Water Systems. Accessed August 24, 2014. Available at: <https://eidea.nmenv.state.nm.us/DWW/index.jsp>

Table D-4. Select Water Systems in Torrance County, 2004-2009<sup>3,4</sup>

Water System	Over Legal Limit?	If yes, which Contaminants are over Legal Limit?	Over Public Health Guideline?	If yes, which Contaminants are over Public Health Guideline?
Carlos Lucero	No	n/a	Yes	Combined Radium (226 & 228) Combined Uranium Radium -226 Radium -228 Radon

<b>Water System</b>	<b>Over Legal Limit?</b>	<b>If yes, which Contaminants are over Legal Limit?</b>	<b>Over Public Health Guideline?</b>	<b>If yes, which Contaminants are over Public Health Guideline?</b>
Cassandra	Yes	Arsenic Lead	Yes	Alpha particle activity Combined Radium (226 & 228) Combined Uranium Radium -226 Radium -228
Clines Corner	No	n/a	Yes	Alpha particle activity Combined Radium (226 & 228) Combined Uranium Radium -226 Radium -228
Echo Valley	No	n/a	Yes	Combined Uranium
Edgewood Meadows	No	n/a	Yes	Alpha particle activity Combined Radium (226 & 228) Combined Uranium Radium -226
Encino	No	n/a	Yes	Lead
Estancia	No	n/a	Yes	Alpha particle activity Combined Radium (226 & 228) Combined Uranium Radium -226 Radium -228 Radon
Homestead	Yes	Alpha particle activity Alpha particle activity (excluding radon and uranium) Nitrate & nitrite	Yes	Combined Radium (226 & 228) Combined Uranium Radium -228
Indian Hills	No	n/a	Yes	Lead
Manzano MDWCA	No	n/a	Yes	Alpha particle activity Combined Radium (226 & 228) Combined Uranium Radium -228
Melody Ranch	No	n/a	Yes	Combined Radium (226 & 228) Combined Uranium



<b>Water System</b>	<b>Over Legal Limit?</b>	<b>If yes, which Contaminants are over Legal Limit?</b>	<b>Over Public Health Guideline?</b>	<b>If yes, which Contaminants are over Public Health Guideline?</b>
Moriarty	No	n/a	Yes	Radium -226 Radium -228 Combined Radium (226 & 228) Combined Uranium Lead
Mountainair	No	n/a	Yes	Radium -228 Combined Radium (226 & 228) Combined Uranium Radium -228
Punta de Agua	No	n/a	No	n/a
Squaw Valley	No	n/a	Yes	Combined Radium (226 & 228) Combined Uranium Lead Radium -226 Radium -228
Sunset Acres	No	n/a	Yes	Combined Radium (226 & 228) Combined Uranium Radium -226 Radium -228
Tajique MDWCA	No	n/a	Yes	Combined Radium (226 & 228) Combined Uranium Radium -226 Radium -228
Torreón MDWCA	No	n/a	Yes	Combined Radium (226 & 228) Combined Uranium Lead Radium -226 Radium -228
Village of Willard	No	n/a	Yes	Combined Radium (226 & 228) Combined Uranium Radium -226 Radium -228

Sources: *The New York Times*, 2012; *Environmental Working Group*, 2009

Table D-5. Mean and Maximum Concentrations by Drinking Water Contaminant for the Three Largest Water Systems in Torrance County, 2013\*<sup>5,6</sup>

Drinking Water Contaminant Analyte Measured in (mcg/L) unless noted	Mean Concentrations in Water System, 2013			Maximum Concentrations in Water System, 2013			EPA Regulation	
	Estancia	Moriarty	Mountain-air	Estancia	Moriarty	Mountain-air	MCL **	Public Health Goal
Arsenic	1.4	1.39	4.4	1.5	1.51	4.4	10	0
Nitrate (measured in mg/L)	1.13	1.49	0.25	1.26	1.63	0.25	10	10
Di (2-ethylhexyl)phthalate, DEHP	0.02	0.03	0.3	0.02	0.03	0.3	6	0
Atrazine	0.02	0.02	0.05	0.02	0.03	0.05	3	3
Halocetic acids, HAA5	0	3.95	0.35	0	6.8	0.35	60	n/a***
Total Trihalomethanes, TTHM	0	21	1.2	0	38	1.2	80	n/a***
Trichloroethylene, TCE	0.05	0.04	0.05	0.05	0.04	0.05	5	0
Tetrachloroethylene, PCE	0.05	0.04	0.05	0.05	0.04	0.05	5	0
Uranium	3.67	5.6	4	5	8	4	30	0
Combined Radium 226 and 228 (measured in pCi/L)	0.15	0.05	0.35	0.3	0.25	0.35	5	0

\* The largest water systems are defined here as those that serve the most people in the County.

\*\*MCL is the maximum contaminant level, defined by the EPA as meaning the level of a contaminant below which there are no known or expected risks to health.

\*\*\* There is not a collective standard for this group of contaminants; however, some individual contaminants in the group have standards. For example, dichloroacetic acid has a goal of zero and trichloroacetic acid has a goal of 300 mcg/L.

\*\*\*\* There is not a collective standard for this group of contaminants; however, some individual contaminants in the group have standards. For example, bromodichloromethane has a goal of zero, bromoform h

1. Estancia Basin Water Planning Committee and HydroSolutions. Estancia Basin Regional Water Plan Update 2010. 2010. [http://ebwpc.org/PDFS/water\\_plan2010/Plan\\_Update\\_Final.pdf](http://ebwpc.org/PDFS/water_plan2010/Plan_Update_Final.pdf). Accessed July 23, 2014.

2. US Department of Agriculture, Natural Resources Conservation Service. (n.d.) *Rapid Watershed Assessment: Western Estancia Watershed*.  
[http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs144p2\\_068349.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_068349.pdf).
3. Duhigg C, Ericson M, Evans T, Hamman B, Willis D. Toxic Waters: A series about the worsening pollution in American waters and regulators' responses. Cassandra Water System. *The New York Times*. <http://projects.nytimes.com/toxic-waters/contaminants/nm/torrance/nm3500330-cassandra-water-system>. Published May 16, 2012.
4. Environmental Working Group. National Drinking Water Database. <http://www.ewg.org/tap-water/fullreport.php>. Accessed August 24, 2014.
5. NM IBIS. Query Results for New Mexico Community Drinking Water Systems and Analytes. [https://ibis.health.state.nm.us/query/result/water\\_CWSanalytes/Water\\_CWSanalytes/SystemsConcentrationsMeans.html](https://ibis.health.state.nm.us/query/result/water_CWSanalytes/Water_CWSanalytes/SystemsConcentrationsMeans.html).
6. US Environmental Protection Agency. National Primary Drinking Water Regulations. 2009. <http://water.epa.gov/drink/contaminants/upload/mcl-2.pdf>.