

# RURAL CHICANA/O COMMUNITIES AND THE ENVIRONMENT: AN ATTITUDINAL SURVEY OF RESIDENTS OF COSTILLA COUNTY, COLORADO

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## *Introduction*

Environmental racism has recently received increased attention from activists, scholars, and policy makers.<sup>1</sup> Increasing numbers of studies are providing evidence of differential patterns of hazardous toxic waste dumping in minority and dominant-group communities and regions.<sup>2</sup> The Center for Third World Organizing cites a 1983 General Accounting Office study which indicates that in three out of every four cases, waste disposal and toxic waste sites are located in low-income, ethnic minority communities.<sup>3</sup> The Commission for Racial Justice found that three out of every five Black and Hispanic Americans reside in areas with uncontrolled toxic waste sites.<sup>4</sup> This racial (and class) feature of environmental degradation has often been overlooked by environmental activists, who tend to perceive ethnic minorities as more willing than Whites to trade environmental protection for the sake of jobs. For instance, a recent research proposal, entitled "Determining Why Minority Communities Demonstrate Little or No Interest in Environmental Issues," states:

In over ten years of providing environmental education programs to schools, public audiences, professional and fraternal organizations, virtually no interest has been observed among minority

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audiences. Further research has determined that minority participation in both local and national natural history museums, zoos, and environmental organizations is extremely limited.<sup>5</sup>

There is, in fact, a considerable social science literature that seeks to determine why ethnic minorities do not participate in the environmental movement and why they appear less interested in environmental issues in general.<sup>6</sup> Critics of this research argue that the problem is not with ethnic minority populations but with environmental organizations, which tend to reflect the concerns of their predominantly White, middle-class constituencies.<sup>7</sup>

Laura Pulido has recently pointed out that:

. . . [W]ithin both the literature and practice of institutional environmentalism, limited attention has been given to issues of poverty, inequity, and racism. This perception is compounded by the fact that the participants of institutional environmentalism are primarily middle-class and Anglo. . . [The] environmental movement has drawn too sharp a line between humans and nature, thus blinding activists to the inherent connections between social justice and environmental protection.<sup>8</sup>

Perhaps minority and dominant groups perceive and focus on environmental issues differently. It may be that mainstream environmentalists are concerned with the protection of wildlife and wilderness areas, while ethnic minorities are more likely concerned with environmental hazards found in their everyday living and working spaces.<sup>9</sup> The problem seems to be one of sharp differences in the definition and prioritization of policy agendas.

Another important dimension to the study of environmental racism is the conflict between indigenous and dominant groups over control and ownership of native lands and waters.<sup>10</sup> As capitalist dynamics intensify in the hinterlands they pose increased threats to the lands and waters once held, managed, and used by indigenous peoples in accordance with their own traditions and practices.

In this study, the environmental attitudes of Chicanas/os in Costilla County, Colorado, are examined.<sup>11</sup> Chicanas/os in northern New Mexico and southern Colorado (also called the Upper Rio Grande bioregion) are among the few population segments in this country that continue to struggle to retain control over their native lands and the natural resources found therein. Although separated by American-

imposed, geo-political boundaries, Chicanas/os on both sides of the New Mexico-Colorado state boundary are bound together by powerful historical, cultural, and kinship ties. For nearly two centuries, and until the conclusion of the American-Mexican War in 1848, the area of present-day Colorado that lies south of the Arkansas River was part of New Spain and, later, Mexico.<sup>12</sup> This area and its peoples formally became part of the U.S. New Mexico Territory in 1850. In 1861, this region became the southernmost part of the Colorado Territory. Because the earliest settlements in Colorado were established by New Mexicans moving northward from Taos and other northern New Mexico towns, the indelible cultural imprint made on the social and natural landscape was that by "New Mexican" Chicanas/os. These early settlements were established as relatively self-sufficient agricultural and ranching settlements.<sup>13</sup> Massive changes in land tenure and usage have taken place during this century which have left Chicana/o communities almost completely dependent upon social services provided by the dominant society.<sup>14</sup> Incorporation within the system of American capitalism resulted in the displacement of a mixed, cash and barter economy by a money economy. It also resulted in the transfer of millions of acres from Chicanas/os to "Americans" and their government, over-grazing and deforestation, soil erosion, and severely damaged watersheds.<sup>15</sup> Today, another capitalist onslaught is underway in the bioregion, with Chicanas/os overwhelmed by the intrusion of development, mining, and recreational companies that seem to commodify everything in their paths. This increased commodification of natural and cultural resources in the Upper Rio Grande bioregion threatens the cultural integrity and everyday lives of local Chicanas/os.<sup>16</sup> It is in this context that we explore the environmental attitudes of Chicanas/os in the bioregion.

### *Literature Review*

Chicanas/os in northern New Mexico and southern Colorado are among the poorest population segments in this country.<sup>17</sup> Studies on this population have shown that members tend to hold a distinctive view of land that differs considerably from those of Anglos and other Americans. T. Atencio, a pioneer in the study of Chicanas/os and land utilization, argues that among this population segment land is directly related to being and life.<sup>18</sup> Rather than being a commodity, as

typically seen by Americans, land among Chicanas/os in the Upper Rio Grande bioregion is home, and for some it is body and soul. This view forms the basis of a land ethic that some have characterized as a "lococentric" or place-centered cultural ecology.<sup>19</sup> A similar point is made by C. Knowlton, who wrote, "A very strong emotional attachment exists between the Spanish-American farmer or rancher and his land. He knows every physical characteristic of his land and regards it as a basic part of his small social and psychological world."<sup>20</sup> Within this cultural framework there is an emphasis on the maintenance and preservation of the environment based on the pragmatic view that the land will not yield much if it is not maintained well.

One of the first empirical studies focusing directly on Chicana/o attitudes toward land and land use is that by Eastman, Carruthers, and Liefer, who found that members of this population segment do indeed have an emotional attachment to the land.<sup>21</sup> Within their view, the land is part of the family. According to the authors of the study, this segment of the Chicana/o population "emphasize[s] land transfer-and-use decisions based upon community welfare. . ."<sup>22</sup> Eastman and his associates also found that education and commercial-mindedness were positively related among Chicanas/os, and that past or present land ownership and rural residence were positively related to the traditional view of land.

A more recent study by Brown and Ingram focusing on water rights and uses found that Chicana/o community leaders in the Upper Rio Grande bioregion tended to oppose the sale and lease of water rights.<sup>23</sup> This opposition, they argue, is grounded in social and cultural concerns rather than in economics. Upper Rio Grande Chicanas/os also tend to oppose recreational development, preferring instead agriculture and the production of wood products.<sup>24</sup>

Some scholars view the traditional attitudes and economic practices of these Chicanas/os as important for the development of the bioregion in ecologically sustainable ways. Van Dresser views their practices as ". . . uniquely suited for an evolutionary development towards the essential bioeconomic community in the future."<sup>25</sup> Van Ness argues that "If the land base of the villagers can be reestablished under the traditional tenure system, then regional economic networks could be rejuvenated without great effort or cost compared to the demands of conventional development programs."<sup>26</sup>

### *Empirical Generalizations*

Using the findings from the foregoing studies we developed three generalizations to describe the environmental orientation of Chicanas/os in the Upper Rio Grande bioregion generally, and Costilla County in particular:

- 1) Chicanas/os in Costilla County exhibit critical attitudes toward land and water uses that they perceive as negatively impacting the community. Where the natural environment in the locality is harmed, the community is harmed.
- 2) Chicanas/os in Costilla County oppose the sale of water rights for commercial ventures, perceiving it as detrimental to the capacity of the land to produce.
- 3) Chicanas/os in Costilla County support economic development ventures that seem to them to benefit the community by being ecologically sustainable and respectful of the local cultural landscape.

We expect that the longer persons have resided in the region, the more they will abide by the local culture, and the more they will tend to hold these ecological attitudes.

### *The Context: Costilla County*

Costilla County is located in the San Luis Valley in southern Colorado. It is one of seven contiguous, rural counties in northern New Mexico and southern Colorado which have Chicana/o majority populations.<sup>27</sup> There are approximately 3,190 persons living in Costilla County, with 2,452 (or 76.9 percent) being of Hispanic origin.<sup>28</sup> Like the other counties in this Indo-Hispano cultural region, Costilla County has a high unemployment rate (more than twice the state-wide average), a high rate of families living below the poverty threshold (35 percent, or four times the state-wide average), and a high rate of out-migration of families and unemployed or underemployed youth.<sup>29</sup> The county is decidedly bilingual; some estimates place Spanish-speaking ability at 95 percent of the Chicana/o population.<sup>30</sup>

The main sources of employment in Costilla County are the county and municipal governments, and the school district. Farming and ranching are the third most important sources of employment.<sup>31</sup> There are few jobs in manufacturing and construction. Mining, too, has

played a negligible role in generating employment opportunities. Federal entitlement programs such as Aid to Families with Dependent Children (AFDC) and Social Security Supplemental Income (SSI) are important sources of income for at least one-third of the county's residents.

In recent times, the population has contended with mining operations in the area that have negatively impacted the environment or threaten to do so. For instance, Earth Sciences, Inc. (ESI), a mining company based in Golden, Colorado, operated a cyanide heap leach operation in the Rito Seco watershed. This watershed is located in the foothills of the Sangre de Cristo Mountains about three miles northeast of San Luis, the capitol of Costilla County. This watershed supports the oldest system of water usage rights in Colorado, *acequias* (irrigation ditches) with decrees dating back to the 1850s. On April 6, 1975, a cyanide spill into the Rito Seco produced a fish kill up to six miles downstream from the leach pad.<sup>32</sup> The Colorado Department of Health issued a cease and desist order. This was followed by a similar action by the Environmental Protection Agency (EPA) in October 1975. In October 1979, the Colorado Department of Health issued another cease and desist order and a "Cleanup Order and Notice of Violation of Previous Order." Also in October 1979, the EPA prevailed in a lawsuit against ESI and ordered the company to reclaim the cyanide leach pad area. The leach pad remains unreclaimed, and a clean-up has yet to be undertaken.<sup>33</sup>

In 1987, Battle Mountain Gold (BMG), a transnational mining corporation based in Houston, Texas, announced plans to develop a strip-mine and cyanide leaching operation in the same area mined by ESI. In December 1989, after lengthy regulatory hearings and court battles, BMG initiated strip-mining activities. BMG now mines for the microscopic specks of gold contained in a series of depositions in a pre-Cambrian basement rock stratum that lies below the Santa Fe Conglomerate. The conglomerate is associated with glacial retreat deposits and is a geological mass of heterogenous materials along the foothills of the Sangre de Cristo Mountains from southern Colorado all the way south to Santa Fe. This conglomerate is considered an "overburden waste" and must first be removed to a depth of up to several hundred feet before reaching the ore-bearing rock. The operation involves strip-mining and crushing the ore-bearing rock to the consistency of flour; the ore is then processed

via an enclosed cyanide leach vat system designed to extract .032 ounces of gold per ton of crushed material. Considerable wastes and tailings are generated through this process, requiring the use of a 240-acre containment pond. This tailings pond is a major threat to the local watershed, and thus to the acequias and the farms and ranches that rely on the Rito Seco for some of their irrigation water.<sup>34</sup>

The strip-mining and cyanide-leaching proposal generated sharp opposition from local Chicano/a farmers, ranchers, and other water users who organized themselves as the Costilla County Committee for Environmental Soundness (CES) in November of 1988. The CES was established to:

- (1) protect the pristine and diverse ecology of Costilla County, (2) promote a healthy balance between agriculture, business, and the environment, and (3) encourage citizen involvement in efforts to keep the environment safe, beautiful, and conducive to the health of residents as well as plants and animals. . . The CES is thus committed to protecting natural and cultural diversity by linking ecological concerns with issues of social justice and equity.<sup>35</sup>

The CES is composed of local farmers, ranchers, clergy, educators, business persons, and community planners. While the CES has a wide-ranging agenda, its principal focus in recent times has been the operation of the BMG mine.

The locals also have had to contend with efforts by American Water Development, Inc. (AWDI) to mine the San Luis Valley's confined aquifer.<sup>36</sup> According to estimates from the U.S. Geological Survey, the confined aquifer is estimated to have at least two billion acre feet of water trapped in detrital sedimentary, indurated volcanic, and volcanoclastic formations at depths ranging from one thousand to over ten thousand feet below the surface of the valley.<sup>37</sup> This would make the San Luis Valley confined aquifer the second largest source of groundwater in the nation after the Ogallala Aquifer, which already has been extensively mined. AWDI's proposal calls for mining 200,000 acre feet of water per year from the confined aquifer.

### *Hypotheses*

Using the above-mentioned generalizations and our understanding of the context in Costilla County, we deduced specific hypotheses that

were tested against empirical attitudinal data collected in a survey that was part of an effort to oppose BMG operations. The data were not collected to test hypotheses, thus the hypotheses are post-survey, and were developed for the purpose of further examining the data. The hypotheses are:

- 1) Chicanas/os in Costilla County will tend to use the local outdoors, such as the county park, for family activities.
- 2) The longer a person's residence, the less likely that person will be to support Battle Mountain Gold's mining operation.
- 3) Generally, Chicanas/os in Costilla County will oppose the exportation of underground water.
- 4) In general, the higher the proportion of Anglos in a community, the more support for Battle Mountain Gold's operation.
- 5) Chicanas/os in Costilla County will prefer agricultural and arts and crafts activities for economic development over mining and tourism-related activities.

### *Method*

This study is based on a survey of voting-age adult residents of Costilla County, Colorado, conducted during the summer of 1990. Two hundred and nine (209) randomly selected residents were interviewed for approximately five minutes each. The interview schedule was designed to be as uncomplicated as possible by using simple, straightforward "Yes" and "No" response categories wherever feasible. Also, questions tended to be forced-choice (See Appendix). Initially, interviews were conducted on a block-by-block, house-to-house basis. Later on, interviews were conducted with residents where they were found, such as at local churches after Sunday mass or outside grocery stores. Interviews were conducted in both Spanish and English, according to the preferences of the interviewees.

### *Results of the Survey*

#### *Sample Profile*

The sample of 209 persons included both genders on a more-or-less equally represented basis.<sup>38</sup> Unfortunately, because the research was conducted with other purposes in mind (emerging as it did out of

social action concerns), the interview schedule failed to include an item on ethnicity, and thus a strict comparison between groups cannot be made. The team, however, reported that 35 (16.7 percent) of the sample were Anglo Americans and 174 (83.3 percent) were Chicanas/os. The age of respondents ranged from 18 to 91 years. The mean age of respondents was 47.5, with a mode and median of 48. The survey respondents are from all parts of Costilla County. For purposes of this study, we identified respondents according to their residence in one of ten settlements within the county.

Table 1 presents selected demographic data on the respondents. The ten residential areas include: La Corridera, Mesita, Blanca, Cuba, Ft. Garland, "Old" San Acacio, Chama, San Francisco, San Pablo, and San Luis. La Corridera is a linear strip of homesteads located between San Luis and San Pablo that is traditionally considered part of San Luis. Cuba is considered a neighborhood within San Luis proper. Approximately 48.5 percent of the respondents are residents of San Luis; 11.2 percent are from San Acacio; another 10.7 percent are from Ft. Garland; 9.5 percent are from San Pablo; 5.3 percent are from Chama; and the remainder are from San Francisco, Cuba, Blanca, Mesita, and La Corridera.

The average length of residency in the valley among respondents is approximately 41 years. The majority are life-long residents of Costilla County (67.5 percent). Another 20 percent of the respondents have lived in the county for more than 10 years. Less than three percent of the respondents have lived in the county for a period of five to 10 years; approximately six percent have lived in the county between one and five years; and less than three percent have lived in the county less than one year.

**TABLE 1:**  
**Selected Demographic Characteristics of the Respondents**

Age Group	Age	
	Age Distribution	
	f	%
18-25	20	9.8 %
26-30	18	8.8
31-35	19	9.3

*Table continued on next page*

**Table 1: (Continued)**

<b>Age Group</b>	<b>Age Distribution</b>	
	<b>f</b>	<b>%</b>
36-40	17	8.3 %
41-45	17	8.3
46-50	24	11.8
51-55	19	9.3
56-60	20	9.8
61-65	16	7.8
66+	34	16.7 %
<b>TOTAL</b>	<b>204</b>	<b>99.9 %**</b>

**Village of Residence\*\*\***

	<b>f</b>	<b>%</b>
San Luis	82	48.5 %
San Pablo	16	9.5
San Francisco	5	3.0
Chama	9	5.3
San Acacio	19	11.2
Ft. Garland	18	10.7
Cuba	8	4.7
Blanca	5	3.0
Mesita	2	1.2
La Corridera	5	3.0 %
<b>TOTAL</b>	<b>169</b>	<b>100.1 %</b>

**Length of Residence in the Valley**

	<b>f</b>	<b>%</b>
Less than 1 year	6	2.9 %
1-5 years	13	6.2
6-10 years	6	2.9
> 10 years	43	20.6
"all my life"	141	67.5 %
<b>TOTAL</b>	<b>209</b>	<b>100.1 %</b>

\* Missing cases = 5. Mean = 47.5. Mode = 48.0. Median = 48.0

\*\* Percentages may not add up to 100 because of rounding.

\*\*\* Missing cases = 40.

*Rito Seco County Park*

Since Costilla County is the only county in Colorado without public lands, it was decided that an assessment of the use of Rito Seco County Park would provide important insights into the environmental attitudes of local residents. The park is the only facility of its kind in the entire county that is a public park in a montane ecosystem. It is located about nine miles east of San Luis in the Sangre de Cristo Mountains. The park offers opportunities for picnics, hiking, and camping, and has a source of clean spring water. The park will very likely be impacted by BMG's strip-mining and milling operations. The county road that leads to the park passes through the middle of the BMG mine site.

Table 2 presents data on the frequency and reasons for use of the county park by the respondents. Approximately 68 percent of the respondents report use of Rito Seco County Park. Nearly 32 percent of the respondents do not use the park. Respondents who use the park averaged 4.3 visits per year. Nearly 19 percent of the respondents use the park more than five times a year; approximately 17 percent use the park four to five times a year; another 15 percent use the park between two and three times a year; and nearly 17 percent use the park at least once a year. These figures indicate locals use the park regularly, with use probably being highest during the summer, as the area has fairly severe winters.

**TABLE 2:**  
**Respondents' Frequency of Use of County Park  
and Reasons for Use**

<b>Frequency of Use of Rito Seco County Park*</b>		
<b>Frequency of Use</b>	<b>f</b>	<b>%</b>
At least once a year	35	16.9 %
2-3 times a year	31	15.0
4-5 times a year	36	17.5
More than 5 times a year	39	18.9
Do not use	65	31.6 %
TOTAL	206	99.9%**

*Table continued on next page*

**TABLE 2: (Continued)**

<b>Reason for Use of Rito Seco County Park***</b>		
<b>Reason</b>	<b>f</b>	<b>%</b>
Family picnics	114	55.3 %
Church groups	9	4.4
School groups	9	4.4
Weddings/social events	8	3.9
Hiking	36	17.5
To get spring water	27	13.1
Other	24	11.7 %

\*Missing cases = 3. Mean = 4.3.

\*\*Percentages may not add up to 100 because of rounding.

\*\*\*Total does not equal 100 because of multiple responses.

Local residents use the park for a variety of reasons. Over 55 percent of the respondents who use the park cited picnics with family as the primary reason for visits to the park. Nearly 18 percent use the park for hiking. Another 13 percent use the park to get spring water. Church, school, and other social groups account for about 13 percent of the use of the park.

### *Battle Mountain Gold Mine*

Although some local leaders depict the communities of the San Luis area as bitterly divided into pro-mine and anti-mine factions, our survey results indicate that Costilla County residents are solidly united in their opposition to the BMG mining operation. Seventy-seven percent of the respondents are opposed to the mine. Only 17.6 percent support the mine, and 5.4 percent are undecided.

Opposition to the mine is not surprising. Not only are cultural orientation and values relevant, as the literature cited above indicates, but toxic problems at both national and local levels (such as the toxic spill by ESI in 1975) may have enhanced residents' sensitivities toward environmental issues and problems. Among the respondents who support the mine, and who answered the interview question dealing with reasons for support, 6.7 percent report that they support the mine because they have a job with BMG. Another 10 percent support the mine because they expect to have a job with BMG in the future.

And, finally, 83.3 percent support the mine because the people in the area need jobs. The principal reason for supporting BMG is the perceived positive impact it will have in terms of employment.

**TABLE 3:  
Respondents' Attitudes Toward Battle Mountain Gold  
by Selected Factors**

<b>Attitudes Toward Battle Mountain Gold*</b>		
	<b>f</b>	<b>%</b>
Support mine	36	17.6 %
Don't support mine	157	77.0
Don't know	11	5.4 %
<b>TOTAL</b>	<b>204</b>	<b>100.0 %</b>
<b>Reason for Support of the BMG**</b>		
	<b>f</b>	<b>%</b>
Have a job at the mine	2	6.7 %
Expect to have a job at the mine	3	10.0
Towns need jobs	25	83.3 %
<b>TOTAL</b>	<b>30</b>	<b>100.0 %</b>
<b>Reason for Opposition to BMG Mine***</b>		
	<b>f</b>	<b>%</b>
Environmental dangers	130	66.7 %
Health hazards	97	49.5
Will hurt promotion of economic development	51	26.0
Water quality	165	81.3
Other reasons	20	10.2 %

\*Missing cases = 5.

\*\*Missing cases = 6

\*\*\*Total does not equal 100.0% because of to multiple responses.

It is important to balance interpretation of these data with some qualitative impressions. On September 4, 1990, the lead author visited the mine site at the invitation of the mine operations manager. A visit with mine workers led to lengthy discussion about the mine and the environment. All eight workers present indicated they were unhappy with the impact the mine was having on the land, but lamented the fact that they had little choice but to work to put food on the table.

One worker stated: "We have never had to tear up mountains before to put food on the table. It is unfortunate that our community is forced to choose between jobs and the environment."<sup>39</sup> It seems clear that even workers who support the mine have ambivalent feelings about the issue: they oppose the environmental destruction, but high levels of unemployment in the county forces them to seek jobs with BMG against their better judgment.

Among those respondents who expressed opposition to the mine, 66.7 percent cited environmental threats as reasons for their views. Nearly 50 percent of those opposed to the mine cited concerns over health hazards, and 26 percent expressed concern over the effects mining may have on the promotion of economic development alternatives. Over 81 percent of the respondents believe the BMG mine will negatively impact water quality in the Rito Seco.

Table 4 presents respondents' attitudes toward BMG by village and length of residence. Although the majority of respondents opposes the establishment of the BMG mine, the survey results indicate interesting differences between villages. Persons who reside in Ft. Garland, which is located north of the mine site, are less likely than most others to express opposition to the mine. In contrast, villagers living downstream from the mine are more likely to express opposition toward BMG, suggesting that perceived direct impact might be a critical factor in engendering opposition to the mine. In San Luis, San Pablo, San Acacio, and La Corridera about four-fifths of the respondents do not support the mine. In Chama nearly three-fourths of respondents did not support the mine. In San Francisco, Cuba, and Blanca, none of the respondents favored BMG. In contrast, in Mesita and Ft. Garland the respondents were evenly split.

**TABLE 4:**  
**Respondents' Attitudes Toward Battle Mountain Gold**  
**by Village and Length of Residence**

Village	Attitudes Toward BMG by Village*			
	Don't Support		Support	
	f	%	f	%
San Luis	62	81.6	14	18.4 %
San Pablo	11	84.6	2	15.4

*Table continued on next page*

**TABLE 4:** (Continued)

Village	Don't Support		Support	
	f	%	f	%
San Francisco	5	100.0	0	0.0
Chama	6	75.0	2	25.0
San Acacio	13	81.3	3	18.8
Ft. Garland	9	50.0	9	50.0
Cuba	8	100.0	0	0.0
Blanca	3	100.0	0	0.0
Mesita	1	50.0	1	50.0
La Corridera	4	80.0	1	20.0 %
TOTAL N = 154	n=122		n=32	

**Attitudes Toward BMG by Length of Residence\*\***

Length of Residence:	Don't Support		Support	
	f	%	f	%
Less than 1 year	4	80.0	1	20.0 %
1-5 years	3	25.0	9	75.0
6-10 years	4	66.7	2	33.3
> than 10 years	32	88.9	4	11.1
All my life	114	85.1	20	14.9 %
TOTAL N = 193	n=157		n=36	

\*Missing cases (including "Don't Knows") among those known by village = 15. Percentages are by rows.

\*\*Missing cases (including "Don't Knows") = 16. Percentages are row percentages. Chi-square (Pearson Value) - 28.54412; 4 df; statistically significant at P = .000001.

Persons residing in Ft. Garland made up 8.6 percent of the survey participants. Of the 18 respondents from Ft. Garland, 50 percent expressed support for the BMG mine. The nine affirmative responses from Ft. Garland constitute 28.1 percent of the total number of respondents supporting the BMG mine. Although residents from Ft. Garland make up less than 10 percent of the survey participants, they are approximately 28 percent of the total number of respondents supporting the mine. The majority of residents of Ft. Garland (and Blanca) are Anglo Americans. Our survey research team noted that 20 of the 23 respondents from the Ft. Garland-Blanca area were Anglo Americans (86 percent). In contrast, less than 15 of the San Luis area respondents were noted as being of Anglo American ethnicity (about

10 percent of 144 respondents). Thus, ethnic difference may play a role in determining attitudes toward industrial mining in the San Luis Valley.

There seem to be two other reasons for the relatively lower levels of opposition to the mine among Ft. Garland residents. One is that Ft. Garland is much further removed from the mine site than are the other villages. Whereas San Luis is about three miles southwest and downstream of the mine, Ft. Garland is about seventeen miles to the north. Ft. Garland's distance from the site, and thus its relative detachment from the potential negative environmental effects of the operation, is another probable reason why its residents seem to support the mine.

Another factor is that residents of Ft. Garland use Rito Seco County Park less frequently than people from the other villages. While close to 65 percent of the total sample uses the park, only 44.4 percent of Ft. Garland respondents do so. This may mean that Ft. Garlanders have less of an interest in the condition of the park than residents of the other villages. Another, more important fact is that Ft. Garlanders will not be directly affected by mining activities. Residents of Ft. Garland do not rely on the Rito Seco for their water needs, as do the residents of the villages downstream of the Rito Seco. Therefore, if the Rito Seco is dried-out or contaminated by mining activities, the livelihoods of the residents are less likely to be impacted than those of the residents of San Luis and other downstream villages.

Support for the BMG mining operation is highest in the predominantly Anglo settlement area and lowest in the Chicana/o settlements. This, combined with the lesser likelihood of being directly impacted by the mine operation, is very likely the principal factor explaining inter-village differences in attitudes toward BMG.

Table 4 also presents data that indicate that support for BMG is related to length of residence. The percentage of respondents who support the mining operation decreases with length of residence in the San Luis Valley. Approximately 75 percent of those who have lived in the valley from one to five years support BMG. In contrast, 85 percent of those who have lived in the area their entire lives do not support the mine. Opposition to BMG increases with the length of residence. The four recent arrivals who do not support the mine may have recently left urban areas and are acutely sensitive to environmental issues.

Table 5 shows the percentage of respondents opposed to BMG by reasons for opposition, length of residence in the valley, and village of residence. Because respondents could provide multiple causes for their opposition, the figures are provided only for the major reasons given. Dangers to the environment and concern over water quality were the most often-cited reasons for opposing BMG. Among those respondents who view the mine as endangering the environment, there is a moderate relationship to length of residence in the valley, with those persons residing in the area longer being more likely to cite this concern. Except for respondents in the villages of Chama and Ft. Garland, there is a majority in each village that cites dangers to the environment as a reason for opposition to the mine. Respondents from Chama, who were the least likely to cite environmental concerns, tended to cite health hazards. Among the respondents from Ft. Garland who oppose the mine, the principal reasons for opposition are dangers to the environment and health hazards. A minority of respondents raised the issue of BMG negatively impacting alternative economic development efforts.

**TABLE 5:**  
**Percentage of Respondents Opposing BMG by Reasons**  
**for Opposition, by Length of Residence in the Valley,**  
**and Village of Residence**

<b>Dangerous to the Environment</b>		
<b>Length of Residence</b>	<b>f</b>	<b>%</b>
Less than 1 year	2	66.7 %
1 to 5 years	3	100.0
6 to 10 years	4	100.0
More than 10 years	24	77.4
All my life	97	87.4 %
<b>Village of Residence</b>	<b>f</b>	<b>%</b>
San Luis	53	88.3 %
San Pablo	10	90.9
San Francisco	5	100.0
Chama	2	40.0
San Acacio	11	84.6
Ft. Garland	4	50.0

*Table continued on next page*

**Table 5:** (Continued)

<b>Dangerous to the Environment</b>		
<b>Village of Residence</b>	<b>f</b>	<b>%</b>
Cuba	7	87.5 %
Blanca	3	100.0
Mesita	1	100.0
La Corridera	3	100.0 %
<b>Health Hazards</b>		
<b>Length of Residence</b>	<b>f</b>	<b>%</b>
Less than 1 year	1	33.3 %
1 to 5 years	2	66.7
6 to 10 years	2	50.0
More than 10 years	24	77.4
All my life	68	61.3 %
<b>Village of Residence</b>	<b>f</b>	<b>%</b>
San Luis	44	73.3 %
San Pablo	6	54.5
San Francisco	3	60.0
Chama	5	100.0
San Acacio	8	61.5
Ft. Garland	4	50.0
Cuba	4	50.0
Blanca	3	100.0
Mesita	1	100.0
La Corridera	3	100.0 %
<b>Will Hurt Promotion of Alternative Economic Development</b>		
<b>Length of Residence</b>	<b>f</b>	<b>%</b>
Less than 1 year	0	0.0 %
1 to 5 years	1	33.3
6 to 10 years	0	0.0
More than 10 years	13	41.9
All my life	37	33.3 %
<b>Village of Residence</b>	<b>f</b>	<b>%</b>
San Luis	23	38.3 %
San Pablo	6	54.5
San Francisco	1	20.0
Chama	1	20.0

*Table continued on next page*

**Table 5:** (Continued)

<b>Will Hurt Promotion of Alternative Economic Development</b>		
<b>Village of Residence</b>	<b>f</b>	<b>%</b>
San Acacio	6	46.2 %
Ft. Garland	0	0.0
Cuba	2	25.0
Blanca	2	66.7
Mesita	0	0.0
La Corridera	0	0.0 %
<b>Harmful to Water Quality</b>		
<b>Length of Residence</b>	<b>f</b>	<b>%</b>
Less than 1 year	4	100.0 %
1 to 5 years	4	36.4
6 to 10 years	4	66.7
More than 10 years	34	89.5
All my life	119	88.8 %
<b>Village of Residence</b>	<b>f</b>	<b>%</b>
San Luis	64	82.1 %
San Pablo	13	92.9
San Francisco	5	100.0
Chama	7	100.0
San Acacio	17	94.4
Ft. Garland	9	52.9
Cuba	7	100.0
Blanca	3	75.0
Mesita	1	50.0
La Corridera	4	100.0 %

With regard to the mine harming the water quality, which was a separate question in the interview schedule, data in Table 5 show that this perception becomes more widespread as length of residence increases. In terms of village of residence, there seems to be widespread concern about the potential harm to the water in the valley by the mining operation. In San Luis, for instance, which had the highest frequency, 82.1 percent of the respondents perceived harm to the water as a result of the mining operation. In Ft. Garland, 52.9 percent perceived harm to the water.

### *Water Resource Issues*

The survey interview was designed to probe local views on the exportation of water from the valley to the Front Range (the plains on the eastern side of the Rockies). This issue also has generated widespread opposition among valley farmers, ranchers, and business and government leaders. We asked survey respondents if they were concerned about the exportation of water from the valley. Data presented in Table 6 indicate that more than 90 percent of the respondents are concerned about the exportation of water; 6.2 percent are not concerned, and 3.3 percent are undecided.

We also asked respondents about the likely impact the exportation of water would have on the San Luis Valley. Nearly 89 percent indicated the exportation of water would lead to the decline of agriculture in the valley. Approximately 22 percent of the respondents believe the exportation of water will lead to the loss of jobs in the valley. Further, 99 percent of the respondents believe that the exportation of water will *not* create jobs in the valley, while only one percent believe that it will create jobs.

**TABLE 6:**  
**Respondents' Attitudes Toward the Exportation of Water  
from the Valley**

<b>Concerned About Exportation of Water from Valley*</b>		
<b>Attitude</b>	<b>f</b>	<b>%</b>
Concerned	188	90.4 %
Not concerned	13	6.2
Don't know	7	3.3
<b>TOTAL</b>	<b>208</b>	<b>99.9 %**</b>

  

<b>Perceived Impact of Exportation of Water on Valley***</b>		
<b>Impact</b>	<b>f</b>	<b>%</b>
Decline of agriculture	174	88.8 %
Loss of jobs	43	21.9
Will create jobs	2	1.0
Will not create jobs	194	99.0
Other	22	11.3 %

\* Missing cases = 1.

\*\* Total percentage does not equal 100 because of rounding.

\*\*\* Total does not equal 100 because of multiple responses.

### *Economic Development Issues*

A final set of questions in the interview schedule dealt with the preferences of local residents toward the types of economic development in the San Luis area. Summary statistics are presented in Table 7. Ninety-seven percent of the respondents expressed support for arts and crafts as a preferred type of economic development activity; 99 percent expressed support for agricultural economic development; 91.5 percent expressed support for tourism as a viable type of economic development activity; and 99 percent expressed support for small business development. Only 19.2 percent expressed support for mining as a type of economic development activity. Opposition to mining in general was slightly greater than that expressed regarding BMG; 80.8 percent of the respondents stated that they did not support mining as a type of economic development activity. Again, the findings may be clarified in light of qualitative statements made to the research team during the interviews. Some of the respondents (n=55) expressed concerns about the role of tourism in local economic development plans. These concerns centered around the idea that "San Luis must not become another Taos."<sup>40</sup>

**TABLE 7:**  
**Types of Economic Development Supported by Respondents\***

Type	Support		Don't Support		Total N
	f	%	f	%	
Arts/crafts	195	97.0%	6	3.0 %	201
Agriculture	201	99.0	2	1.0	203
Tourism	182	91.5	17	8.5	199
Mining	37	19.2	156	80.8	193
Small business	199	99.0	2	1.0	201

\* Row percentages.

There were a variety of views regarding the dangers inherent in tourism as a strategy for economic development. What follows is a sampling of responses to the tourism question:

If we are not careful with tourism, then too many outsiders will come here and our quality of life will be impacted.

Once outsiders come in, then we will see them buying up the land and driving our property taxes up. This is what happened in Taos; the natives will be driven out by wealthy outsiders.

I personally don't want a lot of tourists here because they can be insensitive and rude. They lack an understanding of our traditions and culture.

Tourism has the danger of destroying our cultural landscape. I don't want to see McDonald's and Burger King on our main street.

I heard some tourists from Aspen talking about how sad it is that the billionaires are driving the millionaires out of Aspen and how the millionaires will now have to move to San Luis. What will happen to our lands and homes if the wealthy move in?

Tourism is good if it is carefully regulated and controlled. We must avoid getting into a situation that places added stress on already overloaded public services.

We should not build lodging for tourists until we take care of our own needs first. We need to fix the swimming pool and deal with our sewage disposal before we start building hotels and other tourist-related facilities.

Tourism can be a very positive force for economic development, but I don't want to see our local population cleaning up toilets and garbage after the tourists.

The natural beauty of San Luis is our greatest asset. We should promote a special type of tourism, one that is sensitive to our environmental and cultural values.

While many respondents expressed similar concerns, the majority still favor tourism as an aspect of economic development. The attitudes seem to indicate strong support for tourism if it is low-impact and regulated. Local planners associated with the Economic Development Council in San Luis are cognizant of this fact as exemplified by their efforts to design development plans that are respectful of the local cultural landscape.<sup>41</sup>

### *Discussion*

Studies focusing on the cultural distinctiveness of Chicanas/os in northern New Mexico and southern Colorado have found them to be emotionally attached to the land.<sup>42</sup> Other studies have found that

Chicanas/os in this region have serious concerns about land and water uses they perceive to be detrimental to the community and the natural environment.<sup>43</sup> This attitudinal survey resulted in similar findings. The findings indicate that members of the Chicana/o population in Costilla County use the local mountain park for family activities, oppose mining activities perceived as harmful to natural resources, and oppose the exportation of underground water. Chicanas/os, according to survey responses, prefer agricultural, micro-entrepreneurial, arts and crafts, and low-impact tourism activities as economic development activities that appear ecologically and culturally sustainable.

Opposition to the mine tends to be based on perceived environmental threats, such as the pollution of natural streams and potential health hazards. This finding is in sharp contrast to the view held by those mainstream environmentalists who believe that minorities are not concerned about environmental issues. Further, only a few of the respondents seemed ready to trade ecological soundness for employment. The mainstream environmentalists' view, it was found, simply does not apply to Chicanas/os in southern Colorado and northern New Mexico, where the struggle to preserve the environment occurs within cultural and psychological frameworks that place great emphasis on land. It also occurs within a historical struggle to preserve the "homeland."

Exportation of water is also opposed by locals on the basis that it will negatively impact the community by contributing to the decline of agriculture. And, although a study by Weber found that this segment of Chicanas/os are "rural landholders" rather than "farmers," since they own plots of land but do not farm them, the reasons for the lack of actual participation in agriculture are to be found in the historical patterns of economic domination of this minority group.<sup>44</sup> Nevertheless, there still are many successful Chicana/o farms and ranches in the area, although certainly, many others do not have sufficient capital, credit, or land to operate commercial farms.<sup>45</sup> Still, cultural and psychological orientations emphasize agriculture as a preferred economic activity, along with arts and crafts and limited tourism. Interestingly, Weber perceives the traditional orientation of Chicanas/os as maladaptive in a market-based economy, but completely overlooks the seeming incompatibility of a market-based economy and environmental soundness.<sup>46</sup> He also overlooks the fact

that government officials are more interested in programs emphasizing large-scale development than in rejuvenating the local agro-ecological and subsistence systems.<sup>47</sup>

There is a possibility that the findings reflect urban-rural patterns rather than cultural differences between ethnic groups. For instance, some studies have found that urban persons are more concerned about the environment than those in rural areas.<sup>48</sup> Since Chicanas/os in the study live in the larger communities in Costilla County, this factor may be exerting an influence. However, many other studies looking for urban-rural differences have failed to find them, and we really cannot accept the view that the town of San Luis is urban.<sup>49</sup> It may be that occupational activity in rural areas is more important with regard to concerns about the environment. For instance, Freudenburg found that “. . . persons involved in agriculture generally prove to be *more* concerned about environmental protection than the other residents of the same communities.”<sup>50</sup> Although many Chicanas/os in Costilla County may not be engaged in the production of agricultural commodities, they may be involved in the production of agricultural goods for household consumption. Or they may be involved in mixed production, with both limited sales of goods in local and nearby markets and simultaneous production for the home. It also may be that an agricultural orientation rather than actual production is currently salient in the case of this particular economically displaced minority segment.

### *Conclusions*

In this study it was found that Chicanas/os in Costilla County are greatly concerned about their environment. They are opposed to mining activities that threaten local watersheds, whether they be mining operations or water exportation activities. They prefer agricultural, arts and crafts activities, small businesses, and tourism as directions for sustainable economic development in the region. All of the five hypotheses tested in this study were supported by empirical data on attitudes toward local environmental issues.

It is important to avoid stereotyping minorities as disinterested in environmental issues. It is also important to examine the salience of local environmental issues among minority populations rather than some global sense of environmental concern. Finally, some local

environmental struggles must be understood within the dynamics of struggle over the "homeland."

## APPENDIX

### Selected Interview Schedule Items

Length of Residence	How long have you lived in Costilla County? 1) less than one year, 2) one to five years, 3) six to ten years, 4) more than ten years
Use of Rito Seco	Do you use the county park in the hills by the Rito Seco? 1) Yes, 2) No
Frequency of Use	How often do you use the county park? 1) at least once a year, 2) two to three times a year, 3) four to five times a year, 4) more than five times a year
Reason for Use	What is the main reason for going to the park? 1) picnics with family, 2) church groups, 3) school groups, 4) weddings, other social events, 5) hiking, 6) to get spring water, 9) other
Attitude Toward Mine	Do you support the establishment of the Battle Mountain Gold strip-mine? 1) Yes, 2) No
Reasons for Support	Why do you favor the mine? 1) I have a job there, 2) I expect to have a job at the mine, 3) because the town needs jobs, 9) other
Reasons for Opposition	Why are you opposed to the mine? 1) it is dangerous to the environment, 2) it is a health hazard, 3) it will hurt local efforts to promote other types of economic development, 9) other
Mine Impact on Water	Do you think the mine will affect the water quality of the Rito Seco and other creeks in the area? 1) Yes, 2) No
Exportation of Water	Are you concerned about the export of water from the valley to the Front Range? 1) Yes, 2) No

Impact of Exportation	What impact do you think the export of water will have on your community? 1) it will lead to decline of local agriculture, 2) it will not have an impact, 3) loss of jobs, 4) it will create jobs, 9) other
Economic Development	Of the following types of economic development projects, which do you support? Arts and Crafts, Agriculture (ranching and farming), Tourism, Mining, Small Business

## NOTES

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- <sup>2</sup> Bullard, R., *Dumping in Dixie: Race, Class, and Environmental Quality* (Boulder: Westview Press, 1990); Bryant, P., "Toxics and racial justice," *Social Policy* 2(1): 48-52; 1989; Commission for Racial Justice, *Toxic Wastes and Race in the United States: A National Report on the Racial and Socioeconomic Characteristics of Communities with Hazardous Wastes Sites* (New York: United Church of Christ, 1987); Bullard, R. and Wright, B. H., "The politics of pollution: Implications for the Black community," *Phylon* 48(1): 71-78; 1986; Bullard, R., "Blacks and the environment," *Humboldt Journal of Social Relations* 14: 165-184; 1987a; Bullard, R., "Environmentalism and the politics of equity," *Mid-America Review of Sociology* 12: 21-37, 1987b.
- <sup>3</sup> Center for Third World Organizing, *Toxics and Minority Communities*. Oakland, CA: Center for Third World Organizing, 1986.
- <sup>4</sup> Commission for Racial Justice, *Op. cit.*
- <sup>5</sup> Raptor Education Foundation, "Determining why minority communities demonstrate little or no interest in environmental issues." Aurora, CO: Raptor Education Foundation. Photocopied. p. 1, 1991.
- <sup>6</sup> Hershey, M. R., and Hill, D. B., "Is pollution 'a white thing'? Racial differences in preadults' attitudes," *Public Opinion Quarterly* 41(4): 439-458, 1977-1978; Hutchinson, R., "A critique of race, ethnicity, and social class in recent leisure-

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<sup>7</sup> Bullard, *Op. cit.*; Peña, D., "The 'Brown' and the 'Green': Chicanos and Environmental Politics in the Upper Rio Grande," *Capitalism, Nature, Socialism* 3(1): 79-103, 1992; Pulido, L., "The Los Angeles Chicano Community and Environmental Politics: What Institutional Environmentalism Can Learn from Grassroot Struggles." Research proposal submitted to the Woodrow Wilson Foundation, Rural Policy Fellowship. Graduate School of Architecture and Urban Planning, UCLA, Los Angeles, CA, 1990, and "This Land is Our Land: Nature, Natural Resources and the Struggle for Autonomous Rural Communities in Hispano New Mexico." Paper presented at the 32nd Annual Conference of the Western Social Science Association, Portland, OR, 1989.

<sup>8</sup> Pulido, *Op. cit.*, p. 2, 1989.

<sup>9</sup> Peña, *Op. cit.*, 1992.

<sup>10</sup> See, for example: Epstein, J., "Indigenous attempts to protect the environment: A Pacific island case," *Journal of Environmental Systems* 17(2): 131-148, 1987; Epstein, J., "Political attempts to defend the environment: A Pacific island case," *Journal of Environmental Systems* 17(3): 187-207, 1987-1988; Churchill, W., ed., *Struggle for the Land: Indigenous Resistance to Genocide, Ecocide, and Expropriation in Contemporary North America* (Monroe, ME: Common Courage Press, 1993); Hecht, S. and Cockburn, A., *Fate of the Forest: Developers, Destroyers, and Defenders of the Amazon* (London: Verso Books, 1989); Peña, D., *Ibid.*

<sup>11</sup> Hispanics in northern New Mexico have often referred to themselves as "Spanish Americans," and sympathetic American scholars often have respected that self-referent. However, there also are other self-referents, such as *manito*, *paisano*, *taosenos*, and so on. In order to avoid confusion over these terms, we decided to refer to these peoples as a regional segment of the overall Chicana/o population.

<sup>12</sup> Lux, G. "Ancient aspirations: A Mexican-American view of land reform." In Geisler, C.C. and Popper, F.J., eds., *Land Reform American Style* (Totowa, NJ: Rowman and Allanheld, 1984), 188-205.

<sup>13</sup> Carlson, A. W., "Rural settlement patterns in the San Luis Valley: A comparative study," *The Colorado Magazine* 44(2): 111-128, 1967.

<sup>14</sup> Knowlton, C. S., "Land-grant problems among the state's Spanish-Americans," *New Mexico Business* 20: 1-13, 1967b; Stevens, P., "Changes in land tenure and usage among the Indians and Spanish Americans in northern New Mexico." In Knowlton, C.S., ed., *Indian and Spanish American Adjustments to Arid and Semiarid Environments* (Lubbock: Texas Technological College, 1964), 38-43.

<sup>15</sup> Knowlton, *Op. cit.*, 1967b; Martinez, R., "Chicano lands: Acquisition and loss," *The Wisconsin Sociologist*, 24 (2 & 3): 89-98, 1987.

- <sup>16</sup> Rodriguez, S., "Land, water, and ethnic identity in Taos." In Briggs, C.L. and Van Ness, J.R., eds., *Land, Water, and Culture: New Perspectives on Hispanic Land Grants* (Albuquerque, NM: University of New Mexico, 1987), 313-403.
- <sup>17</sup> Andrews, W. H., "Family composition and characteristics of an economically deprived cross cultural Rocky Mountain area," *Rocky Mountain Social Science Journal* 3(1): 122-139, 1966; Erickson, K. A., and Smith, A. W., *Atlas of Colorado*. Boulder: Colorado Associated University Press, 1985; Martinez, *Op. cit.*; McClean, R. N., and Thomson, C. A., *Spanish and Mexican in Colorado: A Survey of the Spanish Americans and Mexicans in the State of Colorado* (New York: Board of National Missions of the Presbyterian Church in the U.S.A., 1924); Sanchez, G. I., *The Forgotten People: A Study of New Mexicans*. (Albuquerque: Calvin Horn, 1940).
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- <sup>19</sup> Atencio, *Op. cit.*, p. 47. Also see Garcia, R., *A Philosopher in Aztlán: Notes Toward an Ethnophilosophy in the IndoHispano (Chicano) Southwest*. Two volumes. Unpublished doctoral dissertation. Philosophy, University of Colorado, Boulder, CO. 1988; Peña, *Op. cit.*, 1992.
- <sup>20</sup> Knowlton, C. S., "Conflicting attitudes toward land use and land ownership in New Mexico," *Proceedings of the Southwestern Sociological Association*, 18: 60-68; p. 61, 1967a.
- <sup>21</sup> Eastman, C., Carruthers, G., and Liefer, J. A., "Contrasting attitudes toward land in New Mexico," *New Mexico Business* 24(3): 3-20, 1971.
- <sup>22</sup> Eastman, et al., *Op. cit.*, p. 11.
- <sup>23</sup> Brown, F. L., and Ingram, H. M., *Water and Poverty in the Southwest*. (Tucson: University of Arizona Press, 1987).
- <sup>24</sup> Brown and Ingram, *Op. cit.*
- <sup>25</sup> Van Dresser, P., "The bio-economic community: Reflections on a development philosophy for a semiarid environment." In Knowlton, C.S., ed., *Indian and Spanish American Adjustments to Arid and Semiarid Environments* (Lubbock: Texas Technological College, 1964), 53-74.
- <sup>26</sup> Van Ness, J. R., "Modernization, land tenure, and ecology: The costs of change in northern New Mexico," *Papers in Anthropology* 17(2): 168-178. p. 176; 1976.
- <sup>27</sup> The seven counties include, in northern New Mexico, Guadalupe, San Miguel, Mora, Taos and Rio Arriba, and in southern Colorado, Costilla and Conejos.
- <sup>28</sup> Department of Commerce, Bureau of the Census, *1990 Census of Population and Housing*, PL 94-171 Data (CDRM 451100), March 1991.
- <sup>29</sup> See Erickson and Smith, *Op. cit.*; Ogden, J. R., and Associates. *Baca Water Project's Economic Impact on the San Luis Valley*. Alamosa: J. R. Ogden and Associates, 1989.

- <sup>30</sup> According to Charlie Jaquez, Costilla County Committee for Environmental Soundness, in personal communication with Devon Peña, September 1990, San Luis, Colorado.
- <sup>31</sup> Ogden and Associates, *Op. cit.*
- <sup>32</sup> Goforth, B., *Rito Seco fish kill, Costilla County*. Colorado Division of Wildlife, Ft. Garland District. Ft. Garland: Colorado Division of Wildlife. Typewritten, 1975.
- <sup>33</sup> Costilla County Committee for Environmental Soundness. *Chronology of BMG*. San Luis, CO: CES. Photocopied, 1989.
- <sup>34</sup> For an in-depth analysis of the local grassroots legal and political struggles against BMG see: Peña, D. and Gallegos, J., "Nature and Chicanos in Southern Colorado." In Bullard, R., ed., *Confronting Environmental Racism: Voices From the Grassroots* (Boston: South End Press, 1993).
- <sup>35</sup> Costilla County Committee for Environmental Soundness. *The Costilla County Committee for Environmental Soundness: Project Prospectus and Organizational Profile* (San Luis: CES. Photocopied. p. 1., 1990).
- <sup>36</sup> See Peña, D., *Preliminary Field Report: San Luis Valley Farmer-Rancher Opposition to American Water Development, Inc.*. Unpublished field report. Rio Grande Bioregions Project, Hulbert Center for Southwestern Studies, Colorado College. Photocopied. 1990.
- <sup>37</sup> Colorado Ground-Water Association. *Water in the Valley*. (Lakewood: Colorado Ground-Water Association, 1989).
- <sup>38</sup> The interview schedule did not include a gender identification item; however, the research team reported that about 55 percent of the respondents were female and 45 percent were male.
- <sup>39</sup> Field interview with workers at Battle Mountain Gold mine site by Devon Peña, September 1990, San Luis, Colorado.
- <sup>40</sup> Taos is a neighboring county south of Costilla and located in New Mexico. Its county seat, Taos, has changed demographically and culturally in dramatic fashion during the past two decades, when Anglo Americans in-migrated in relatively large numbers mainly as a result of tourism. See Martinez, R. "The rediscovery of the 'Forgotten People.'" In Mindiola, Tatcho, et al., eds., *In Times of Challenge: Chicanas and Chicanos in American Society* (Houston, TX: Mexican American Studies Program, University of Houston, 1988); Rodriguez, S., "Art, Tourism, and Race Relations in Taos: Toward a Sociology of the Art Colony," *Journal of Anthropological Research*, 45(1), 1989.
- <sup>41</sup> Charles Manzanares, Economic Development Council, in personal communication with Devon Peña, September 1990, San Luis, Colorado.
- <sup>42</sup> Atencio, *Op. cit.*; Knowlton, *Op. cit.*, 1967a.
- <sup>43</sup> Brown and Ingram, *Op. cit.*
- <sup>44</sup> Weber, K. R., "Necessary but insufficient: Land, water, and economic development in Hispanic southern Colorado," *The Journal of Ethnic Studies* 19(2): 127-142, 1991.

For a critique of Weber's findings see: Peña, D. and Martinez, R., *Hispanic Centennial Farms: A Cultural and Natural History of Land Ethics in Transition*. Unpublished research proposal. Hulbert Center for Southwestern Studies, Colorado College, 1993.

<sup>45</sup> For an agro-ecological study of commercial Chicano agriculture in the Upper Rio Grande see Peña, D., "Agroecology of a Chicano Family Farm." Paper presented at the 35th Annual Conference of the Western Social Science Association, Corpus Christi, TX. April 21-26, 1993.

<sup>46</sup> Weber, *Op. cit.*

<sup>47</sup> Van Dresser, *Op. cit.* We use the term "subsistence" with some hesitation. Further research on the agricultural history of the bioregion reveals that production for exchange has long accompanied subsistence production in Chicano family farms. See Peña and Martinez, *Op. cit.*, 1993. We would characterize the bioregional economy of the Chicana/o Upper Rio Grande as one involving "autarkic presumption" (i.e., under favorable market conditions production goes for cash sales and under less favorable conditions the family farm produces for self-sufficient consumption; in either case, production for self-consumption remains a steady feature of the agroecological system).

<sup>48</sup> Freudenburg, W. R., "Rural-urban differences in environmental concern: A closer look," *Sociological Inquiry* 61(2): 167-198, 1991.

<sup>49</sup> Freudenburg, *Ibid.*

<sup>50</sup> Freudenburg, *Ibid.*, p. 193.