

GAO

Report to the Chairman, Committee on  
Agriculture, House of Representatives

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November 1990

# RURAL DEVELOPMENT

## Problems and Progress of Colonia Subdivisions Near Mexico Border

549922





United States  
General Accounting Office  
Washington, D.C. 20548

**Resources, Community, and  
Economic Development Division**

B-240765

November 5, 1990

The Honorable E (Kika) de la Garza  
Chairman, Committee on Agriculture  
House of Representatives

Dear Mr. Chairman:

As requested, we are providing information on nine counties in the four states bordering Mexico<sup>1</sup> concerning the (1) number, location, and water and sewer problems of colonias; (2) state and local efforts to address these water and sewer problems; and (3) state and local efforts to control further development of colonias. Although there is no generally agreed-to definition, the term colonias, as defined by us for this review, generally refers to rural, unincorporated subdivisions along the U.S.-Mexican border in which one or more of the following conditions exist: substandard housing, inadequate roads and drainage, and substandard or no water and sewer facilities.

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## Results in Brief

Of the four states we reviewed, only Texas and New Mexico reported the presence of colonias. Officials in the Texas counties we visited reported about 842 colonias with 198,000 residents. New Mexico County officials reported 15 colonias with 14,600 residents.

In Texas, 60 percent of the colonias in counties we visited have water supplies, but less than 1 percent have sewage systems. In New Mexico, 80 percent of the colonias have water and 7 percent have sewer systems. Within these colonias that have water systems, some problems exist with the adequacy of the systems. For example, in some Texas colonias, residents only have outside water spigots to provide water and do not have indoor plumbing. Sometimes residents have not hooked-up to the water system because they cannot afford the user fees.

According to officials, some New Mexico colonias with public water and sewer systems need significant upgrading to bring them up to standards. In colonias without public water systems, residents typically use wells that present a potential contamination hazard. In colonias without sewer, residents typically use septic tanks and pit privies that do not meet public health standards.

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<sup>1</sup>Webb, Hidalgo, Cameron, Willacy, Starr, and El Paso Counties, Texas; Dona Ana County, New Mexico; Pima County, Arizona; and San Diego County, California.

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Both Texas and New Mexico have programs available to fund water and sewer development. Texas has recently authorized \$100 million to fund water and sewer projects in those counties with economically distressed areas and all counties adjacent to the Mexico border. Eighty percent of the New Mexico colonias currently have public water as a result of state and local efforts; however, efforts to provide sewer systems to those colonias have been minimal.

Over time, the efforts of municipal water suppliers and nonprofit water corporations have served to extend public water to 60 percent of the Texas colonias and 80 percent of New Mexico colonias. The Farmers Home Administration (FmHA) of the U.S. Department of Agriculture has funded some of these water supply projects; other federal and state programs and resources have also assisted. However, historically, almost no effort has been made to provide sewage facilities to colonias.

Although only two states in our review have colonias as defined by us, all states in our review now have requirements that would work to limit future development of colonias. Most recently, Texas passed legislation in 1989 requiring that political subdivisions in affected counties, including all border counties, adopt state model rules in order to become eligible for state financial aid for water and sewer projects. The rules ensure the availability of adequate drinking water and sewer facilities. Before this law, there was no specific requirement that such facilities be provided.

However, Texas officials indicate this law may not fully preclude future colonia developments because the statute exempts subdivisions having individual tracts larger than 1 acre. Also, regulations in Dona Ana County, New Mexico, requiring developers to provide water for household use exempts subdivisions with less than 100 parcels.

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## Background

Colonias—as defined by our review—are predominantly located in counties along the Texas-Mexico border. Available data, although limited, indicate that residents of colonias are mostly Mexican-American; many work as seasonal farm laborers, and many have incomes below the poverty level. Most colonias in Texas originated in the early 1950s when developers began creating unimproved subdivisions outside city boundaries.

A 1987 Congressional Research Service (CRS) report describes how colonias developed. Land developers sold small plots of land in unincorporated subdivisions to low-income people. The developers often financed these land purchases for 10 percent down and \$10 to \$80 monthly payments. A deed of ownership rarely accompanied this arrangement. By Texas law, all that had to be provided were roads and drainage. Until recently, counties did not have a clearly defined legal authority to require developers to provide water and sewer to colonias; thus, in most cases, these systems were not initially installed in colonias.

Income and employment data which can provide some insight into the economic condition of colonias are not available specifically for colonias; however, such data are available for the counties in which colonias are located. Colonia residents comprised about 14 percent of the population (per county) in the 6 Texas counties visited. In Dona Ana, New Mexico, colonias' residents numbered about 11 percent of the population. In fiscal year 1987, the unemployment rate for the Texas counties visited averaged 18.6 percent compared with the 8.2 percent county average unemployment rate in the state. For per capita income, the visited counties averaged \$7,067 versus \$12,876 for Texas (per county). Starr County, Texas, had the highest unemployment rate of the counties visited—36.1 percent—and the lowest per capita income—\$4,252. Colonia residents comprise about 26 percent of Starr County's population, the highest percentage in the counties visited. In New Mexico, Dona Ana's unemployment rate of 7.5 percent compares with the 11.5 percent rate for the state. However, the per capita income in Dona Ana was \$9,578 compared with the \$10,806 for the state.

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## Colonias: Number, Location, and Water/Sewer Problems

Colonias are primarily found in Texas counties along the Mexico border. Of the six Texas counties visited, El Paso estimated that it had the largest number of colonias' residents (70,000), followed by Hidalgo (60,000), Cameron (45,000), Starr (10,000), Webb (9,500), and Willacy (3,400). These residents—almost 198,000—live in an estimated 842 colonias that are located mostly in the southern portion of these counties. Of the 10 Texas border counties we did not visit, each reported colonias—totaling about 61 and having almost 11,000 residents (according to a 1987 CRS report). About 60 percent of the colonias in the counties visited have access to public water systems. Only 3 of the 842 colonias in the counties visited have public sewage disposal systems. Most of the on-site sewage disposal methods being used by the other 839 colonias are believed by some local officials to be substandard.

However, even those Texas colonias that have water systems encounter problems. Some residents cannot afford the hookup and monthly service charges and thus do not use the water service provided. In a few large colonias with water service, major subareas remain without service. Some colonias experience inadequate water pressure. A water system sometimes means that residents are provided only with an outside spigot; often they remain without indoor plumbing as they simply tap the spigot and haul water inside.

Colonias in New Mexico are reported only in Dona Ana County, which borders both Mexico and Texas. County officials estimate that Dona Ana has 15 colonias that meet our definition with about 14,600 residents. Of these, 12 have access to a public water system, but only 1 has access to a public sewer system.

According to Arizona State and Pima County officials, colonias do not exist in Arizona. However, several housing developments, somewhat similar to colonias, have emerged. These developments occur when a developer splits a large lot into three parcels—the maximum split allowable without forming a subdivision that is subject to statewide regulation of subdivisions. Each of these three parcels is then subdivided into threes, followed by possible additional splits, thereby creating an unregulated development. These developments are similar to colonias with respect to lack of adequate water supply, but they typically differ from colonias as defined by us, generally because individual housing units are subject to state approval of their sewage systems.

California State and San Diego County officials do not believe that colonias exist in California. Officials indicated that California has very strict rural subdivision regulations and zoning ordinances which likely prevent the development of colonias. However, San Diego has a related problem concerning lack of affordable housing for some legal and illegal aliens who without authorization occupy land owned by others and have little or no shelter and no water or sewer—a situation different from colonias as we have defined them, which are unincorporated subdivisions where residents are reported to contract for parcels of land.

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## Efforts to Address Water and Sewer Problems

In Texas we found efforts at the state and county levels to address the water supply and sewage disposal problems in colonias. The Texas legislature passed a law in May 1989 authorizing, after voters' approval of a state constitutional amendment, \$100 million in bonds to be used to provide loans and grants for water and sewer projects in counties with economically distressed areas and all border counties with colonias.

About 60 percent of the colonias in the six Texas counties have been provided public water through the efforts of municipal suppliers and nonprofit water corporations. Funds for these water projects were sometimes provided by FmHA. Although legislation was recently passed (becoming fully effective after our field work was completed) authorizing funding for water and sewer facilities in border counties, historically, almost no progress has been made to provide sewage facilities to Texas colonias. Sewage systems have been provided to only three colonias—two in Cameron County and one in Webb County. In the approximately 839 colonias without sewage systems, residents rely upon on-site disposal methods such as pit privies and septic tanks (often substandard).

The state of New Mexico has programs available for funding local water and sewer systems and has provided funding to many municipalities and local water consumer associations. According to Dona Ana County officials, public water has been extended to most of the county, including 80 percent of the colonias; however, efforts to bring sewage disposal facilities to the colonias have been minimal.

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## Efforts to Control Colonias Development

In 1989, Texas passed legislation essentially requiring that economically distressed areas, including border counties and their political subdivisions, adopt model rules in order to become eligible for state financial assistance for water and sewer projects. The rules ensure the availability of adequate drinking water and sewer facilities. Such model rules must prohibit the establishment of residential developments with tracts of 1 acre or less that do not provide for adequate water supply and sewer services. Also, these rules must prohibit more than one single-family detached dwelling per tract.

Officials indicate that this legislation may not fully preclude the future establishment of colonias, since it does not bar residential developments having tracts larger than 1 acre.

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New Mexico has empowered counties to regulate subdivisions, including the authority to require land developers to provide adequate water supply and sewage disposal facilities. Although Dona Ana County requires developers to provide water for household use, the requirement generally applies only to subdivisions of 100 or more parcels of land. Thus, generally, developers who limit their subdivisions to less than 100 parcels are not required to provide water to the residents.

Appendixes I through IV discuss the colonias situation in each of the four states reviewed, including the results of our visits to the counties in each.

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We conducted our review between March 1989 and February 1990 in accordance with generally accepted government auditing standards. We limited our review to available information obtained primarily through site visits, observations, discussions with state and county officials, and review of available studies of colonias' problems. We visited and had discussions with officials in six Texas counties on or near the border and in one border county each in New Mexico, Arizona, and California. In each county, we toured several colonias accompanied by local officials. In addition, we discussed colonias-related issues with state officials in each of the four border states. As agreed with your office, we did not review the colonias situation in all border counties. As requested, we selected the four Texas Lower Rio Grande Valley counties—Hidalgo, Cameron, Willacy, and Starr. We selected Webb County and El Paso County, Texas; Dona Ana County, New Mexico; and San Diego County, California, because of reports of the existence of colonias. We selected Pima County, Arizona, since it is the only border county in the state with a major metropolitan area (Tucson), which is usually expected to attract colonias' developments.

As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 14 days from

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the date of this letter. At that time we will send copies to the Secretary of Agriculture; the Director, Office of Management and Budget; and other interested parties. Major contributors to this report are listed in appendix V.

Sincerely yours,

A handwritten signature in black ink, appearing to read "John W. Harman". The signature is fluid and cursive, with a large initial "J" and "H".

John W. Harman  
Director, Food and  
Agriculture Issues

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**Abbreviations**

CDBG	Community Development Block Grant
CRS	Congressional Research Service
FmHA	Farmers Home Administration
HUD	Department of Housing and Urban Development

# State of Texas

## Colonias: Number, Location, and Water/Sewer Problems

Table I.1 summarizes our findings concerning the number of colonias, the number of colonias' residents, and the number of colonias having water and sewer facilities for each of the Texas counties visited. We present information on the water and sewer problems of each county later.

**Table I.1: Texas County Summary of Colonias, 1989<sup>a</sup>**

County	Number colonias' residents	Number colonias	Number colonias with	
			Water systems	Sewage systems
Webb	9,500	40 <sup>b</sup>	3	1
Hidalgo	60,000	366	329	0
Cameron	44,931	115 <sup>c</sup>	103	2
Willacy	3,402	9	7	0
Starr	10,000	62	42	0
El Paso	70,000	250 <sup>d</sup>	19	0
Six County				
<b>Total</b>	<b>197,833</b>	<b>842</b>	<b>503</b>	<b>3</b>

<sup>a</sup>Estimates provided to GAO by local officials.

<sup>b</sup>Rio Bravo is included as a Webb county colonia because it was a colonia at the time of our field visit (1989), but we have since learned that Rio Bravo was incorporated after our visit. El Cenizo is a colonia with public water and sewer, but is still considered a colonia since it has substandard housing and inadequate roads and drainage.

<sup>c</sup>La Coma and Portway Acres, just outside Brownville in Cameron county, are subdivisions that are considered colonias even though they have public water and sewer since they have substandard housing.

<sup>d</sup>In addition to the 250 El Paso county colonias, the town of Socorro has an estimated 100 subdivisions (with 15,000 residents) that developed as colonias, but they fail to meet our definition of colonias because Socorro reinstated its government in 1986 and these colonias were located in an incorporated town at the time of our field visit.

We did not survey Texas colonias in counties other than the six we visited. However, a CRS report, entitled Border State Colonias: Background and Options for Federal Assistance, gives reported estimates of the number and populations of colonias in border counties for 1987.<sup>1</sup> Data from that report indicate that 91 percent of the Texas colonia residents lived in the 6 counties that we selected for review. The remaining 10 counties reported to CRS a total of 61 colonias and 10,850 colonia residents for 1987.

<sup>1</sup>The abstract to the CRS report defines colonias as follows: "Colonias" are subdivision communities located in unincorporated areas adjacent to U.S. cities along the United States-Mexico international boundary. Many of these communities have inadequate public works services, particularly water supply and wastewater treatment.

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## State Efforts to Address Colonias' Water and Sewer Problems

Texas passed legislation in May 1989 amending the State Water Code to provide financial assistance for water supply and sewage disposal projects. In November 1989 Texas voters approved this provision as a constitutional amendment, thus authorizing \$100 million in bonds to provide water and sewer loans and grants to counties with economically distressed areas and to all border counties in which colonias are located.

In addition, the Texas Water Development Board has been administering three funds that financially assist eligible political subdivisions with water and/or wastewater projects—the Texas Water Development fund, the Water Assistance fund, and the State Revolving fund. Counties have sometimes used these funds to extend assistance to colonias and to plan water/sewer projects for colonias.

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## State Efforts to Control Colonia Development

Until recently, Texas has not specifically authorized counties to require developers to provide adequate water and sewer services to unincorporated subdivisions, including colonias. In 1989, Texas passed legislation that essentially requires political subdivisions in affected counties, including all border counties, to adopt model rules requiring that adequate drinking water and sewer facilities be provided in order for these political subdivisions to be eligible for state financial aid for water and sewer projects. These model rules must prohibit establishing residential developments—defined as developments with individual tracts of 1 acre or less—that do not provide for adequate water supply and sewer services. Also, these rules must prohibit the construction of more than one single-family detached dwelling per tract.

A manager in the Texas Department of Community Affairs and an El Paso County Attorney believe that the legislation does not fully preclude the future establishment of colonias. The statute applies to rural subdivisions with individual tracts of 1 acre or less. Officials believe that if developers create subdivision tracts larger than 1 acre, the new law will not apply and developers could continue to create colonias without adequate water and sewage services.

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## Webb County

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### Colonias: Number, Location, and Water/Sewer Problems

During our visit, Webb County had 40 colonias—3 with water systems and 1 of these with a sewage system—and had approximately 9,500 residents according to county officials. Figure I.1 shows the geographic location of these colonias.

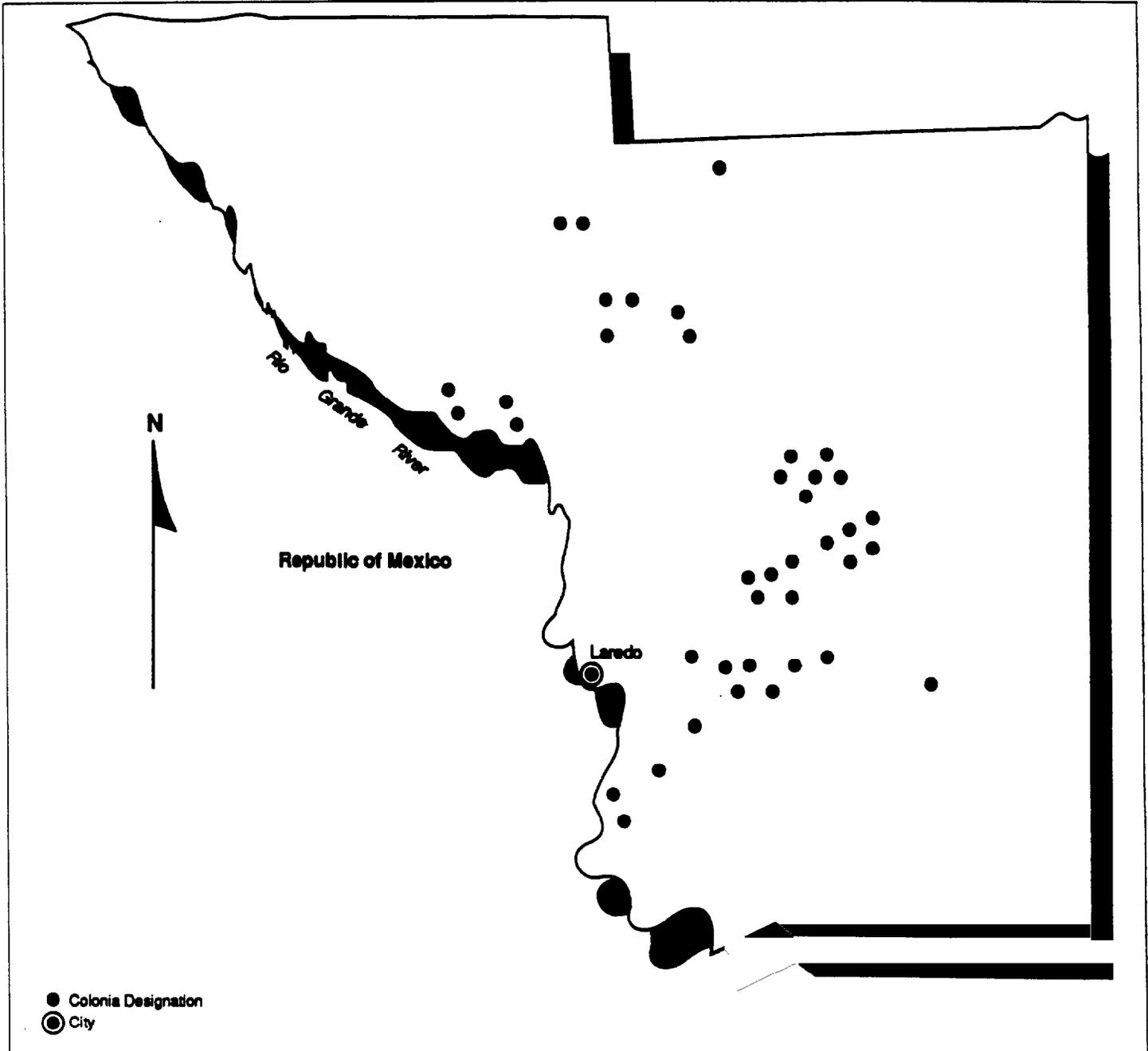
One of the county's largest colonias, Rio Bravo, was incorporated subsequent to our visit and therefore is no longer technically a colonia although it still retains colonia characteristics such as substandard housing and inadequate roads and drainage. Rio Bravo was one of three Webb county colonias with a public water supply. The developer of Rio Bravo had been building a sewage treatment plant; however, county officials stated that the Texas Health Department had stopped construction because the plant was being built on an unplatted area of the subdivision. El Cenizo, a large colonia bordering Rio Bravo, receives water from Rio Bravo but has its own sewage treatment plant; however, it still has substandard housing and inadequate roads. A third colonia, Larga Vista, located just outside the Laredo city limits has water but no public sewer facilities. The remaining 37 colonias have no access to a public water supply. Some residents travel as far as 25 to 30 miles to any of three county owned water spigots to fill their water containers.

Laredo, the county's only urban center, has a policy of not extending water lines outside the city limits except to industrial development sites. Colonia residents are not permitted to hook up to the water lines extended to industrial development sites, even though the lines may be located nearby.

The main source of water for county areas along the border is the Rio Grande River. Wells in the southern part of the county produce water that is nonpotable because of high salt content.

Pit privies are the primary method of sewage disposal for Webb County colonias. Of the 40 colonias, only El Cenizo has public sewage treatment facilities.

Figure I.1: Colonia Locations in Webb County, Texas



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**Local Efforts to Address Colonias' Water and Sewer Problems**

Community Development Block Grant funds were used to extend city water lines into a colonia just outside the city limits of Laredo; we found no other evidence of government sponsored projects to address colonias' problems in Webb County.

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**Local Efforts to Control Colonia Development**

According to the Webb County Judge, during our March 1989 visit, the county did not have the authority from the state to require rural developers to provide adequate water and sewer facilities to the subdivisions. Although county subdivision regulations require county approval of all rural subdivision plats prior to the developers selling lots to the public, a provision for water and sewer facilities is not a criteria for plat approval. Also, the county does not actively monitor the start of new subdivisions, so unplatted developments can and do occur. Sometimes, the county first learns of new unplatted subdivisions when county road crews discover new construction and report it to their supervisors.

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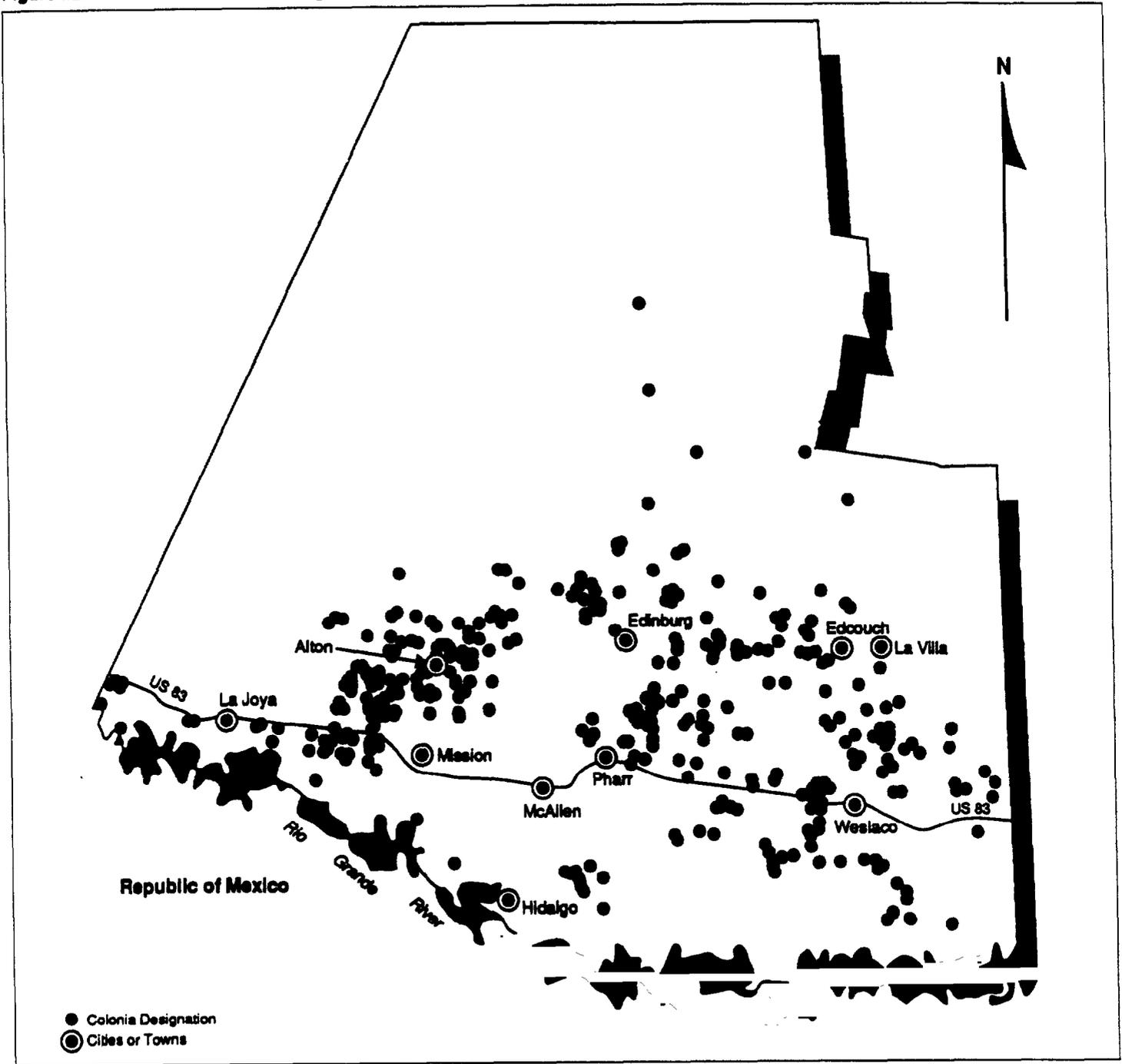
**Hidalgo County**

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**Colonias: Number, Location, and Water/Sewer Problems**

The Hidalgo County Chief Planner estimated that the county has about 366 colonias with 60,000 residents. None of these colonias have sewage systems, but 329 have water supply systems. His estimate of 366 colonias agrees with the Texas Water Development Board's 1987 "A Reconnaissance Level Study of Water Supply and Wastewater Disposal Needs of the Colonias of the Lower Rio Grande Valley." Figure I.2 shows the location of Hidalgo county colonias.

Figure I.2: Colonia Locations in Hidalgo County, Texas



The Chief Planner estimated that 90 percent of the county's colonias have access to water supplied by four nonprofit water corporations. However, he believes that about 85 percent of the residents in colonias having water supply systems are hooked-up to the system; the remaining 15 percent of the residents probably cannot afford to hook up and/or pay the monthly fees. In addition, some residents on a water system have only an outside water spigot to provide water; that is, they still lack piped water into the residences and indoor plumbing.

According to this official, 10 percent of the colonias in the county are not on water supply systems because the residents cannot afford installation costs. Therefore, financial assistance for installing a distribution system would be needed to bring water to these colonias.

No public sewer system is available to colonias in Hidalgo County. According to the Chief County Planner, septic tanks, some of which are substandard, and pit privies are the primary methods of on-site sewage disposal.

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### Local Efforts to Address Colonias' Water and Sewer Problems

Because of its 350,000 plus population, Hidalgo County is considered an urban county eligible for the Department of Housing and Urban Development's (HUD) Community Development Block Grant (CDBG) Program. According to its Program Director, the Hidalgo Urban County Program's goal is to provide a decent and viable urban environment by promoting standard housing and necessary infrastructure, and expanding economic opportunities principally to low- and moderate-income people. The county received about \$5,600,000 in CDBG funds in fiscal year 1989 for allocation among the county and its cities and towns. The county's share, \$750,000, was used primarily for street improvements, including improvements in some colonias.

We found only one county CDBG project that funded a colonia water system. A \$15,000 CDBG project for the Perezville colonia funded the installation of 4,000 linear feet of water lines to colonia residents—60 percent of whom have low- and moderate-incomes.

Besides the Perezville CDBG project, other water improvement projects in rural Hidalgo County were carried out by four nonprofit water supply corporations servicing the county. The Chief County Planner said that these improvements have extended potable water to about 90 percent of Hidalgo colonias. Many of these improvements were supported by FmHA loans and grants.

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## Local Efforts to Control Colonia Development

Hidalgo County subdivision regulations require developers to obtain Commissioners Court approval of rural subdivision plats before selling lots. In addition, Hidalgo County adopted subdivision regulations on March 9, 1987, requiring new rural subdivisions to have potable water and adequate sewage disposal facilities.

Also, the county requires that rural construction projects have building permits prominently displayed on the premises. The sale of building permits gives the county Planning Department an idea of growth areas and an opportunity to find out if the areas being developed have been platted. County building inspectors travel the county looking for construction activities not displaying building permits as a way to identify subdivisions that may not be platted.

The Chief County Planner said that when an unplatted subdivision is found, notification is provided to the county commissioner of the precinct in which the subdivision is located. That commissioner is responsible for action that assures the subdivision complies with county regulations.

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## Cameron County

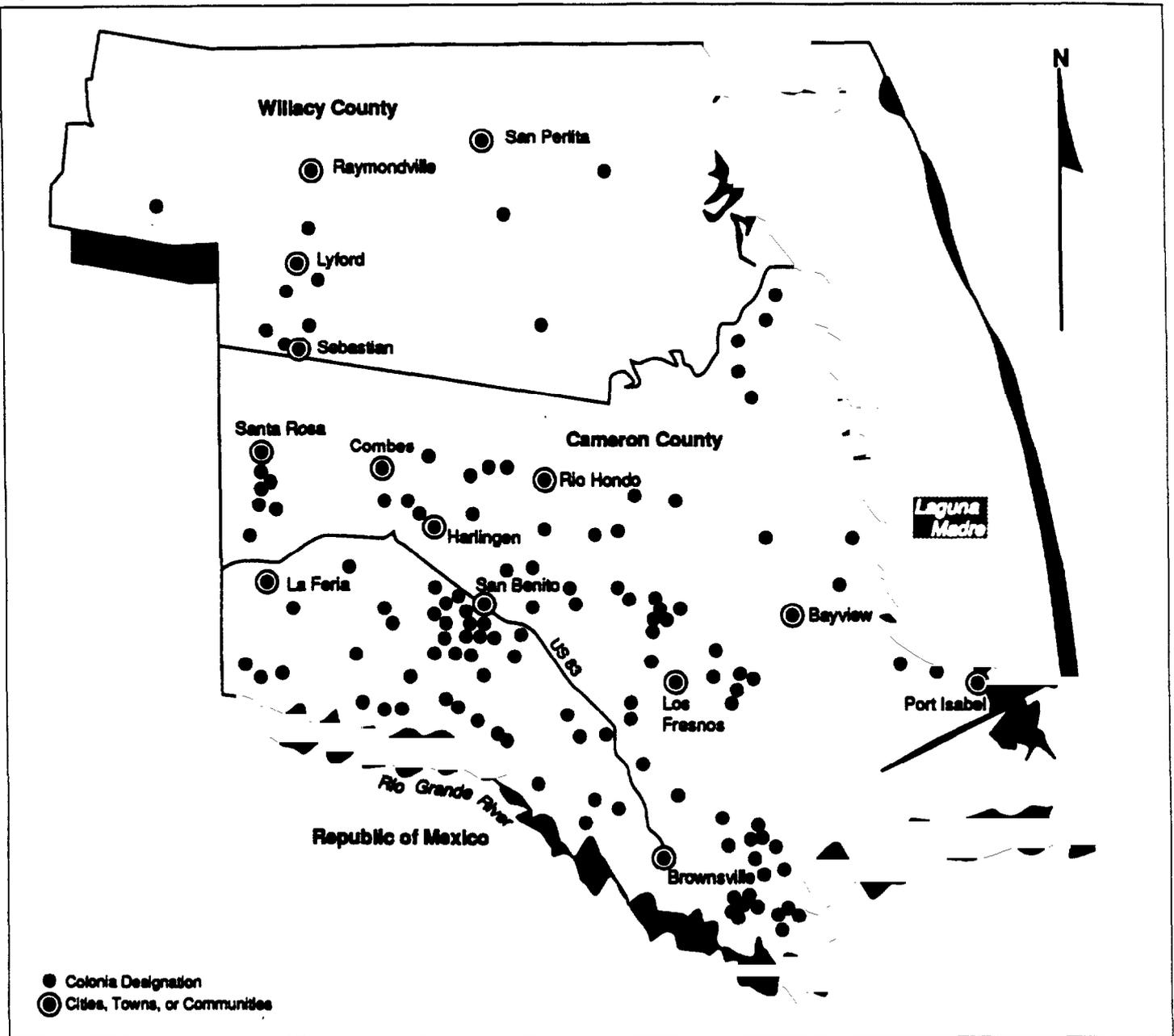
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### Colonias: Number, Location, and Water/Sewer Problems

The Cameron County Community Development Coordinator and Health Department Inspectors estimated that the county has 115 colonias with about 44,931 residents. Two colonias have sewage and water, and another 101 have water systems only. Figure I.3 shows the location of these colonias.

Approximately 90 percent of the colonias have access to potable water provided by five nonprofit water corporations and municipal water suppliers, including Brownsville and Los Fresnos.

Figure I.3: Colonia Locations in Cameron and Willacy Counties, Texas



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However, not all areas within some large colonias have public water. For example, Cameron Park is one of the largest colonias with between 2,000 and 3,000 residents; however, one of its subareas (Park III) does not have water service. The County Community Development Coordinator stated that funding has not been available to install a water distribution system in Park III.

According to the Community Development Coordinator in the County Planning Department, the only colonias with public sewer systems are La Coma and Portway Acres which are serviced by the city of Brownsville. Septic tanks (some substandard) and pit privies are typically used for on-site sewage disposal.

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### Local Efforts to Address Colonias' Water and Sewer Problems

According to the County Planning Department's Community Development Coordinator, the La Coma and Portway Acres colonias just outside of Brownsville have been provided water and sewage projects and street improvements to make them attractive for annexation by Brownsville. However, the city has not taken action to annex. The county used grants from the Texas Community Development Program to make these improvements. (Cameron is a rural county and not entitled to federal CDBG funds, for which only urban counties are eligible.)

Nonprofit water supply corporations that serve the county are using FmHA loan and grant funds to extend potable water to the colonias within their service areas. FmHA has funded Cameron County water projects totaling \$9,097,100 between 1978 and 1988, according to available FmHA information, which was confirmed by the manager of a local county water supply corporation.

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### Local Efforts to Control Colonia Development

Cameron County requires that subdivision plats receive commissioner's court approval before the sale of lots by developers. However, the county's subdivision regulations, adopted in 1971, do not require that water and wastewater facility plans be included in subdivision plats. The county plans to use the authority provided by the 1989 Texas legislation to require developers to adhere to new subdivision regulations for water and sewage service, according to the County Engineer.

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## Willacy County

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### Colonias: Number, Location, and Water/Sewer Problems

County Commissioners estimate that Willacy County has 9 colonias with 3,402 residents. Seven colonias have water systems but none have sewage. Figure 1.3 identifies the location of colonias in Willacy and Cameron counties.

Commissioners said that three nonprofit water supply corporations and the city of Lyford supply water to some rural areas of the county. Only the Zapata Ranch and El Toro colonias do not have water supply systems. However, in the other seven colonias, many residents have inadequate water pressure or have not hooked-up to the water supply system because they cannot afford the fees.

According to County Commissioners, no sewer system is available to the colonias. Septic tanks (some substandard) and pit privies are typically used for on-site sewage disposal.

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### Local Efforts to Address Colonias Water and Sewer Problems

We found no evidence of colonia water/sewer assistance. However, two County Commissioners have conducted door-to-door surveys in their respective precincts to gather information needed to apply for state grants to improve water service to colonias.

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### Local Efforts to Control Colonia Development

We did not find any county subdivision regulations in Willacy County. According to the County Judge, the county uses ordinances and state health regulations to regulate subdivisions only to the extent needed to comply with the National Flood Insurance Program. These ordinances do not require that developers provide potable water and wastewater facilities in subdivisions.

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## Starr County

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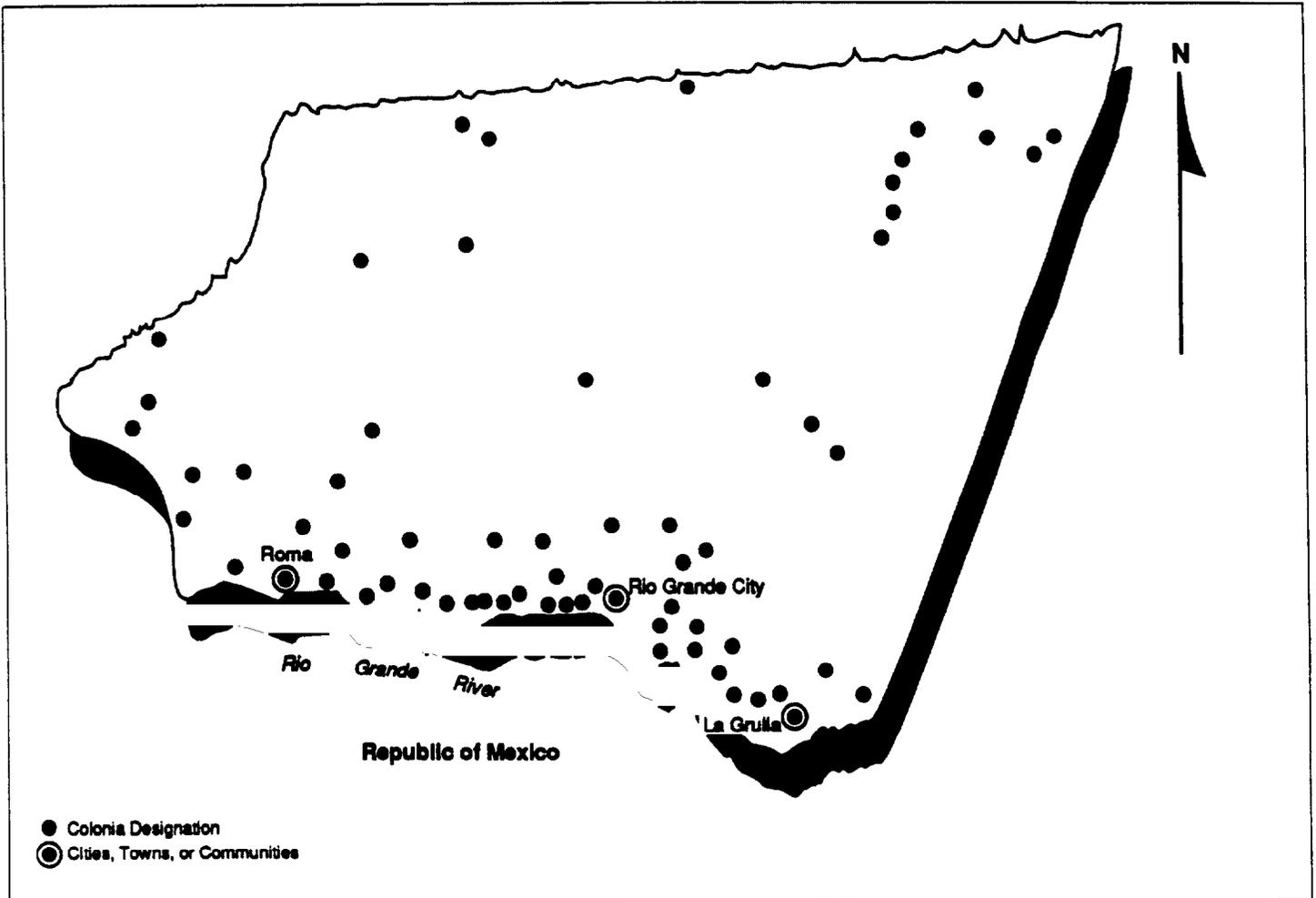
### Colonias: Number, Location, and Water/Sewer Problems

According to the County Coordinator of Federal and State Programs, Starr County has 62 colonias with an estimated 10,000 residents. None of the colonias have sewage, but 42 have water systems. Figure I.4 shows the location of colonias.

According to the County Coordinator, 42 colonias in the southern part of the county receive water from public water systems. However, this official said that these colonias frequently experience inadequate water pressure, especially during peak evening hours. The remaining 20 colonias located in the northern part of the county use well water.

The County Coordinator said that none of the colonias have access to a public sewer system. He added that substandard septic tanks and pit privies are typically used for sewage disposal.

Figure I.4: Colonia Locations in Starr County, Texas



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**Local Efforts to Address Colonias' Water and Sewer Problems**

The County Coordinator said that colonias in the southern part of the county receive water service from the cities of Roma and La Grulla, the Starr County Water Control and Improvement District, and five non-profit water supply corporations. Some of these entities have used \$3,424,400 in FmHA funds between 1978 and 1988 to extend water lines to colonias and to fund a water treatment facility. The source of water for the southern area is the Rio Grande River and the Falcon Reservoir. The colonia residents in the northern part of the county have individual water wells and are not serviced by water suppliers.

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**Local Efforts to Control Colonia Development**

In June 1988 the Starr County Commissioners Court revised the county's subdivision regulations to require that proposed rural subdivision plats contain a guarantee that residents will have access to potable water. Also, developers must provide each lot within a subdivision with a connection to a public sewer system, if available. If not available, developers must provide for either septic tanks or a sewage treatment plant. By requiring that water and sewer systems meet standards, the county plans to prevent the future development of colonias.

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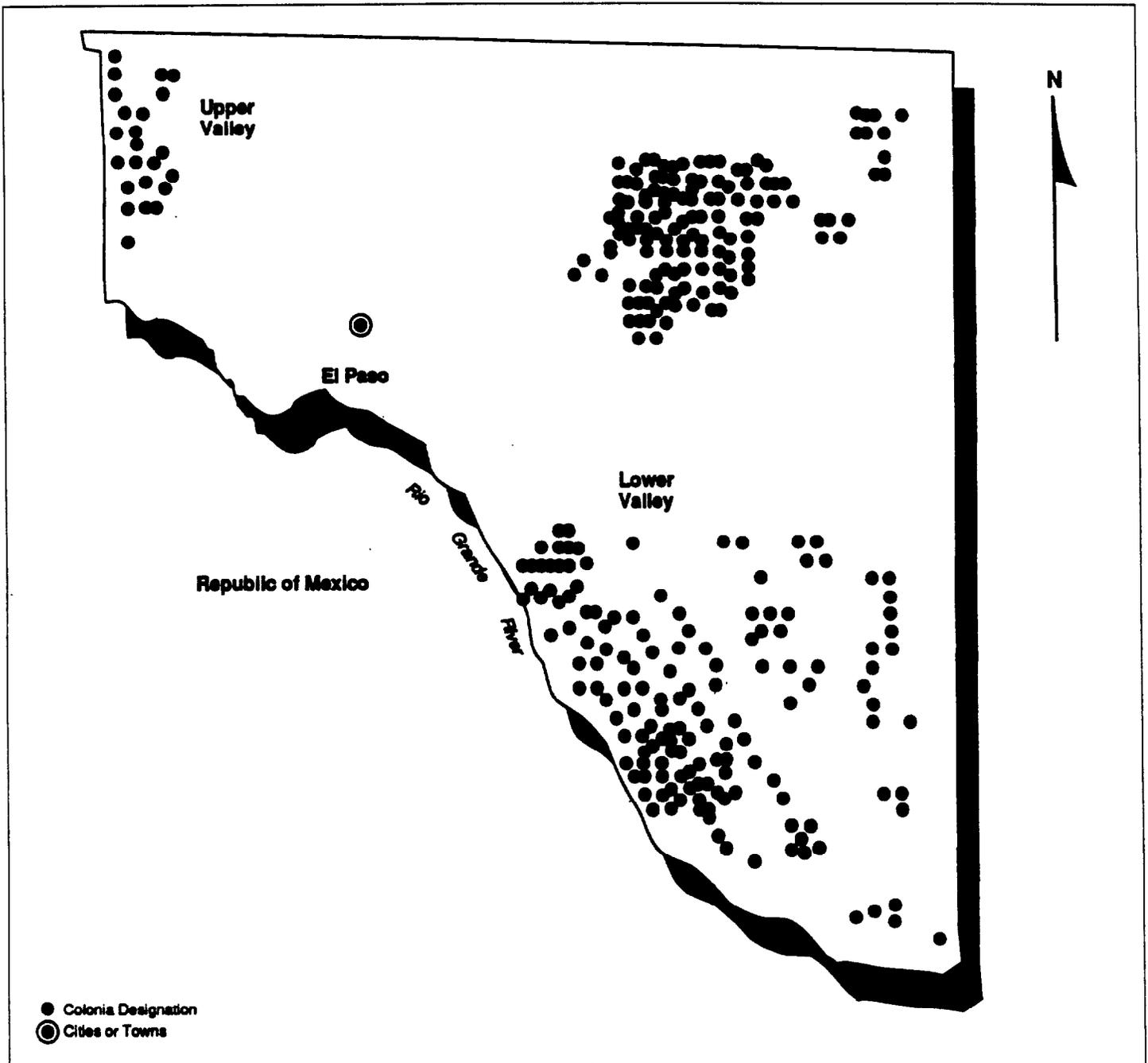
**El Paso County**

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**Colonias: Number, Location, and Water/Sewer Problems**

The Subdivision Coordinator of the El Paso County Road and Bridges Department estimates that about 250 colonias exist in the county. Only 19 of these have water and none have sewage systems. An attorney in the County Attorney's Office estimates that 70,000 residents live in these colonias. Since 1983, three colonias located in the Northwestern part of the county have been annexed by the city of El Paso. Figure I.5 shows the location of colonias.

Figure I.5: Colonia Locations in El Paso County, Texas



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According to the Subdivision Coordinator, only about 19 of the 250 colonias are connected to a public water system. Residents in the remaining colonias either haul in water from their friends and relatives that live elsewhere or have it delivered by a local water delivery company. The city of El Paso stopped extending water lines outside the city limits in 1979.

According to the County Attorney's Office, none of the 250 colonias have access to a public sewer system. Colonia residents use septic tanks, pit privies, and cesspools for sewage disposal.

According to the Mayor of Socorro, an estimated 100 colonias were incorporated into the town of Socorro in 1986. These 100 developments do not meet the definition of colonias used in this review since they were incorporated before our field visit. However, they still retain many features of colonias. The town has about 25,000 people, approximately 15,000 of whom live in these former colonias, that still do not have access either to public water or to public sewer systems.

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### Local Efforts to Address Colonias' Water and Sewer Problems

The El Paso County Lower Valley Water District Authority (the "Authority") is a conservation and reclamation district created in 1985. The Authority's goal is to provide water to Lower Valley residents living in about 137 colonias located within the Authority's boundaries. The Lower Valley comprises an area of approximately 220 square miles in the southeast section of El Paso County and runs from the eastern edge of the city of El Paso southeast to the town of Tornillo about 25 miles away and includes the city of Socorro.

In January 1989 the El Paso City Council approved the purchase by the Authority of 55 miles of water lines outside El Paso and within the Authority's boundaries. The city also agreed to furnish treated drinking water to the Authority. This approval represents the first agreement by the city and its water system manager, the Public Service Board, to expand water service outside the city limits since 1979. The 55 miles of water lines were in place before 1979 and currently serve about 3,000 customers.

In addition to providing the Authority with treated drinking water, the city of El Paso is constructing a \$25 million water treatment plant within its city limits. This plant should provide an economical and nondepleting water supply to the Lower Valley and the city of El Paso.

As agreed, once the plant is completed, the Authority will be provided with a dependable water supply from the city.

Until the Public Service Board completes the new water treatment plant in 1992, the Authority can connect as many as 600 homes and businesses a year to the current system. However, as of January 30, 1990, the Authority has completed hookups to only 104 households. The average cost for a connection is about \$1,200.

The Authority, with the help of a \$500,000 low interest loan from The Ford Foundation and a \$500,000 line of credit from five Lower Valley banks (\$100,000 each), established a revolving loan fund in January 1990. Loans will be provided to residents of the Authority to help finance the cost of the hookups and line extensions necessary to provide potable water.

However, according to the Authority's Assistant General Manager, as of February 14, 1990, only 5 out of 100 applications have been approved, and 4 have been denied by the Authority. An applicant must have \$215 cash to cover the water connection fee. A loan of about \$985 is then made to the applicant to cover the average \$1,200 cost for connection and line extensions.

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## Local Efforts to Control Colonia Development

The El Paso County subdivision regulations do not require that developers provide water and sewer facilities to subdivisions because county officials do not believe they have the specific authority to do so. However, in July 1988 the El Paso County Lower Valley Water District Authority—an authority independent of the county government—adopted regulations governing the provision of water-related services to new subdivisions within its boundaries. These regulations require developers of any new subdivision to provide water services to the property line of each lot. However, according to the Authority's Assistant General Manager, there are no requirements for developers to provide sewer facilities to these subdivisions.

Under the Texas law effective in 1989, affected counties that include economically distressed areas or that are adjacent to the Mexico border and their political subdivisions are required to adopt state model rules for new subdivisions, including providing adequate water and sewer services, in order to be eligible for state financial aid for water and sewer projects. An attorney in the County Attorney's Office believes the new law may not fully preclude the future development of colonias because

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the new law applies only to development of residential tracts of 1 acre or less, so developers may continue developing colonias with tracts over 1 acre.

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# State of New Mexico

## Colonias: Number, Location, and Water/Sewer Problems

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Based on our definition of colonias and information provided to us by New Mexico state and county officials, all of the New Mexico colonias are reported to be located in one county—Dona Ana. Dona Ana has 15 colonias with about 14,600 residents, including 12 colonias with access to public water systems and 1 with access to public sewer. The problems with these systems will be discussed later.

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## State Efforts to Address Colonias' Water and Sewer Problems

The state of New Mexico funds water system construction through its Rural Infrastructure Program. In addition, a revolving loan program using federal and state funds is available for sewage treatment facilities. Both programs are administered by the New Mexico Surface Water Bureau of the Environmental Improvement Division (EID) of the Health and Environment Department.

According to the Chief, Wastewater Construction Section of the EID, \$6,034,500 in grants from a special state appropriation were provided to six communities in Dona Ana County between 1983 and 1989. Four of the six communities are colonias.

In addition, New Mexico political subdivisions or municipalities can apply for Community Development Block Grant funds. The incorporated areas can apply directly to the state council administering the CDBG funds, whereas the unincorporated areas must apply through their county government. Each incorporated area and county is limited to submitting only one project funding request to the state council each year.

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## State Efforts to Control Colonia Development

New Mexico has empowered counties to regulate subdivisions by adopting requirements for water, sewage disposal, and roads. Thus, each county controls how much substandard development it will allow within its boundaries. The state requires that county regulations include requirements for

- sufficient water for subdivision use,
- water of an acceptable quality,
- liquid and solid waste disposal, and
- sufficient and adequate roads.

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## Dona Ana County

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### Colonias: Number, Location, and Water/Sewer Problems

The Dona Ana County Board of County Commissioners has identified 16 colonias with about 21,600 residents in the county. However, the city of Sunland Park did not meet our definition of a colonia because it is incorporated. Thus, for our review, we excluded Sunland Park as a colonia, leaving 15 subdivisions meeting our definition of a colonia having a total of about 14,600 residents. Three of the 15 colonias have no access to public water and rely on individual water wells. The remaining 12 colonias have access to a public water system provided by surrounding municipalities or mutual domestic water consumers associations; these systems are in need of repair and/or upgrading.

According to a Dona Ana County Community Services Administration's study, "Colonias: Conditions in Dona Ana County, New Mexico" (March 1988), a fairly common alternative to an organized water system is the drilling of private wells. However, in a county with a median annual family income of \$12,000 (approximately \$10,000 along the border), the average cost of \$8,000 to drill a well is often prohibitive. According to the New Mexico State Engineer's Office, District 3, several community water well systems have poor quality water, insufficient pressure, water rights ownership disputes, and/or suspected wastewater contamination. Figure II.1 shows the location of colonias in Dona Ana County.

The Board of County Commissioners included the unincorporated town of Anthony as a subdivision in its list of the 15 colonias because of the existence of substandard housing. Although Anthony has public water and sewer systems, county officials believe that the water system is in need of upgrading to bring it up to standards.

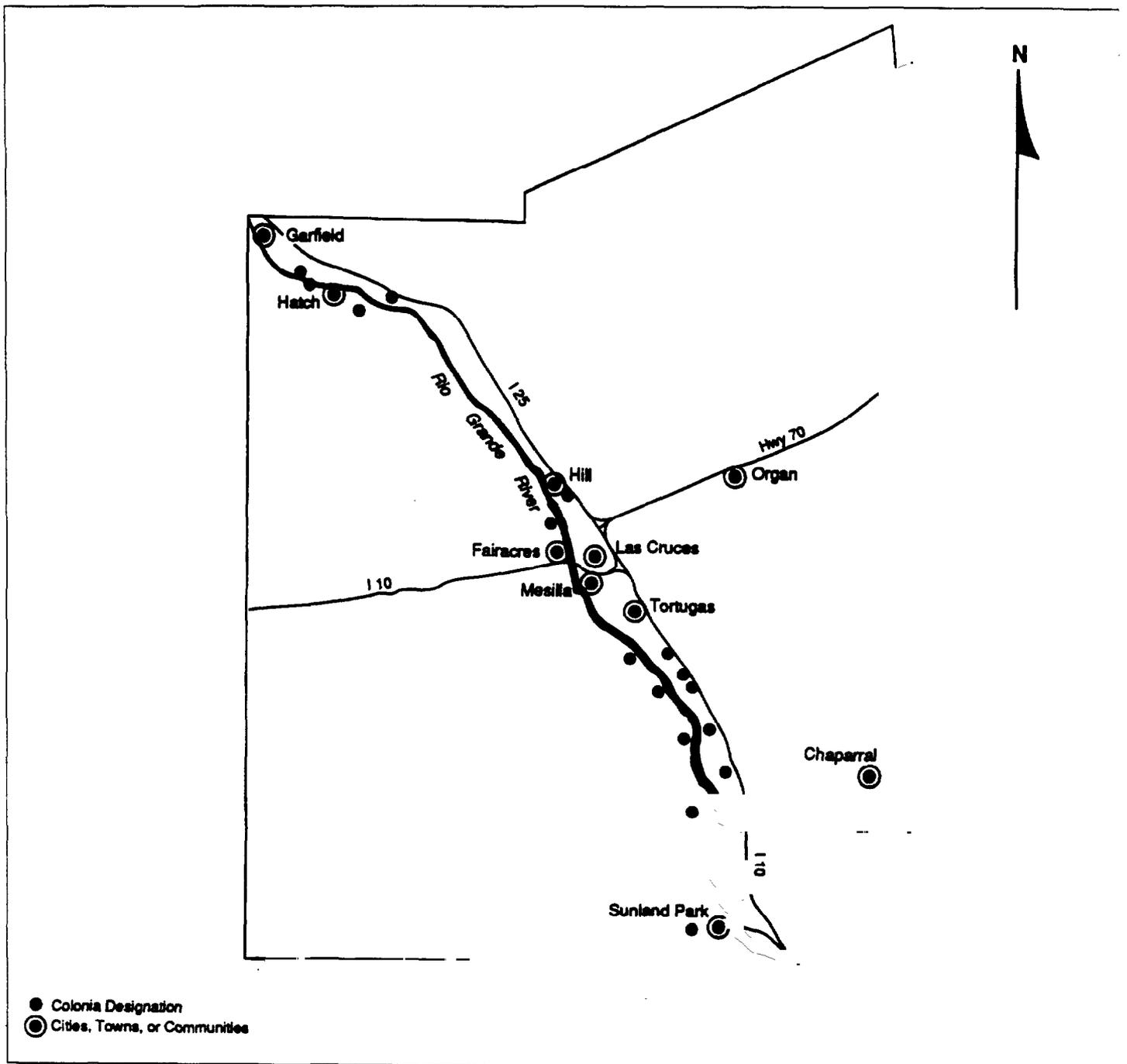
Most areas in the county are served by, or are within service areas of, seven regulated water utilities and several mutual domestic water consumers associations. However, the existence of these water supply services does not preclude problems with water service and quality, and economic factors in colonias limiting the use of such services.

The Board of County Commissioners stated that Anthony is the only one of the 15 colonias having access to a public sewer system. Residents in

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the remaining colonias use septic tanks and cesspools for sewage disposal. Suspected groundwater contamination related to the close proximity of water wells to septic tank leach fields is a continuing problem in all parts of the county.

Figure II.1: Colonia Locations in Dona Ana County, New Mexico



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### Local Efforts to Address Colonias' Water and Sewer Problems

According to the county's March 1988 study, at the core of the colonia problems is the strained economic base in the county, which limits the ability of residents to improve living conditions and the ability of the county to help correct such conditions.

Nevertheless, the county has funded projects to bring utilities to rural communities. The county recently received state funding to study a sewer system for one colonia, Dona Ana.

Also, water has been brought to most areas in the county by the seven regulated water utilities in the county and several mutual domestic water consumers associations. Many of these water systems are in need of repair. According to the president of Moongate Water Company, which has the largest service area of any public water company in the state, the company has extended service in the last 5 years to approximately 50 people who previously had hauled water for domestic needs over long distances.

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### Local Efforts to Control Colonia Development

Dona Ana county subdivision regulations require that subdivisions containing 100 parcels or more (any one of which is less than 10 acres) shall be provided water from existing or proposed water supply systems. In addition, developers planning subdivisions of 5 to 100 parcels (any one of which is less than 10 acres), or 5 or more parcels, each being 10 acres or more, shall provide water supply for all except household uses. Household water supply may be provided by the subdivider or by the owner of each parcel at his own expense. Thus, generally, developers who limit their subdivisions to less than 100 parcels are not required to provide water to the residents.

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# State of Arizona

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## Colonias: Number, Location and Water/Sewer Problems

According to state and county officials, colonias are not known to exist in Arizona. However, the Manager of the State Office of Water Quality stated that some rural housing areas in Arizona have inadequate water supplies because developers have found a way to circumvent state subdivision regulations governing the provision of water services. This circumvention occurs when developers split land into three parcels, which is the maximum split allowable without creating a subdivision; later, each of these three parcels split into three, followed by possible subsequent splits until a housing development has been created. These housing developments differ from colonias as defined in this study since the state has sewage standards that apply to all housing units, whether in a subdivision or not; further, many of these housing developments have adequate housing and roads compared with the many colonias that do not.

According to this official, problems with water systems in these housing areas surfaced publicly because of resident complaints. Although legislative proposals calling for the elimination of lot splitting have been defeated, a current bill in the state legislature contains the same proposal.

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## State Efforts to Address Colonias' Water and Sewer Problems

This state official said that no state financial program exists to help counties and/or small water companies with water and sewer projects. He added that a state constitutional provision prohibits private or public service corporations from receiving state or local government funds. Bills have been introduced in the state legislature to set up a revolving loan fund for water and sewer projects to include private or public service corporations as recipients. These bills have not passed and he anticipates no state financial aid for water projects in the near future.

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## State Efforts to Control Colonia Development

State subdivision regulations require that developers provide adequate water and sewer facilities to residents of subdivisions. The regulations define a subdivision as any improved or unimproved property that is divided for purposes of sale or lease into four or more lots or parcels with each lot or parcel containing less than 36 acres.

In addition, the state subdivision regulations require that no subdivision shall be sold or offered to the public in any manner, and no permanent building shall be erected until the Arizona Department of Health Services or its designated representative has approved plans and specifications for the water supply and sewage and garbage disposal.

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## Pima County

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### Colonias: Number, Location, and Water/Sewer Problems

According to the Community Development Coordinator, County Community Services Department, no subdivisions in the county have inadequate sewer and living conditions that would classify them as colonias. However, he estimates that about 17 rural subdivisions and/or developments in the county, mostly of low- to moderate- income residents, have no public water system and some have no water system at all. The substandard developments are located in the eastern part of the county around the city of Tucson. Most of these rural subdivisions are provided water by one of many small private water companies that have an inadequate water supply. Septic tanks are the primary means of sewage disposal in the unincorporated areas of the county, but these septic tanks generally meet state standards.

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### Local Efforts to Address Water Problems

According to the County Community Development Coordinator, Pima County is using CDBG funds to improve water and sewer facilities in rural subdivisions. CDBG funds have been used to help residents of rural subdivisions that have no water system and those connected to small privately owned water companies that have been spawned by development of rural subdivisions and that are faced with inadequate or unsafe water supplies. However, the coordinator stated that county block grant funds are not sufficient to solve all the needs of these residents.

A Pima County Legislative lobbyist believes that a state government-funded loan program could be of major assistance to the small water companies for upgrading their water systems, but he believes that such a program is prohibited by state law.

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### Local Efforts to Control Colonia Development

Pima County subdivision regulations require developers to provide adequate water and sewer facilities to subdivision residents. Although, as previously described, the regulations have a loophole whereby developers may circumvent the requirements and create housing developments that are not subject to subdivision regulation, these developments do not meet our definition of colonias generally because they are required by state standards to have adequate sewer facilities.

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# State of California

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## Colonias: Number, Location, and Water/Sewer Problems

We visited California because of preliminary reports of the existence of colonias. However, the Chief of the Southern California Region, Public Water Supply Branch, California Department of Health Services, said that to his knowledge no colonias, as we define them, exist in southern California.

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## State Efforts to Control Colonia Development

According to this state official, California has very strict rural subdivision regulations and rural zoning and planning ordinances that probably have prevented the creation of colonias such as those in Texas.

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## San Diego County

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### Colonias: Number, Location, and Water/Sewer Problems

According to the San Diego County Project Coordinator, Department of Transborder Affairs, no developments located in the county meet our definition of colonias. However, he pointed out other serious problems with legal and illegal aliens who lack access to affordable housing. These people have resorted to building makeshift dwellings on the hill-sides or any place that may give them temporary shelter. These shelters are located in close proximity to where the aliens work as farm laborers or in the wholesale nursery business.

According to this county official, the situation is getting worse because the number of aliens is increasing and the county does not have the resources to provide affordable housing. Thus, the aliens are left to exist in makeshift dwellings (or none at all) without potable water or sanitation facilities, and they are often chased from place to place by land-owners under orders from the county health department.

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### Local Efforts to Control Colonia Development

The County Project Coordinator, Department of Transborder Affairs, credits strict state and county regulations, a vigorous monitoring and enforcement program, and high land prices for the nonexistence of colonias in San Diego County. In addition, the state has very strict rural zoning and planning ordinances that have been adopted by San Diego County. These regulations provide a sharp contrast to the generally unregulated situation in Texas.

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# Major Contributors to This Report

**Resources,  
Community, and  
Economic  
Development Division  
Washington, D.C.**

---

**Edward Zadjura, Assistant Director  
James L. Hedrick, Assistant Director  
Monica L. Nickens, Information Processing Assistant**

---

**Dallas Regional Office**

**Sherrill H. Johnson, Regional Manager's Representative  
Enrique E. Olivares, Evaluator-in-Charge  
Enemencio S. Sanchez, Site Senior  
Jocelyn R. Duran, Evaluator  
Robert R. Summerhays, Evaluator**



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