



# Children of the Colonias

Funded by the [W.K. Kellogg Foundation](#)

[Dr. Jaime Chahin](#), Project Director  
[Southwest Texas State University](#)

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# The Need

"Colonia" is a Spanish term for "neighborhood" or "community." In Texas, "colonia" refers to an unincorporated settlement that often lacks basic water and sewer systems, paved roads, and safe and sanitary housing. Colonias can be found along the US-Mexico border in California, Texas, New Mexico, and Arizona. Texas has the largest number of colonias (1,400 Texas colonias live primarily along the state, about 1,248 miles from the border of Mexico) and the greatest colonia population. The colonia population in Texas is predominately Hispanic; 64.4 percent of all colonia residents under 18 years of age were born in the United States. The plight of these colonia families has largely gone undocumented and unnoticed by policy makers as the social problems within these communities continue. These problems include a lack of educational, health care, and public resources.

Assuring quality education for children living in the colonias is a major challenge because of the high rate of student dropouts, irregular student attendance, and health problems. According to the Texas Education Agency, Region I, school attendance is affected by inadequate clothing, language barriers, peer pressure, and the financial need of secondary school students to hold jobs. The longitudinal dropout rate for secondary colonia students averaged 17.3 percent compared to an estimated state average of 14.4 percent.

Furthermore, health problems of children and adults residing in colonias are widespread. The University of Texas Systems Texas-New-Mexico Border Health Office reported the following rates of selected viral diseases in colonia residents per 100,000 population:

Hepatitis A: 43.9%

Salmonellosis: 21.3%

Shigellosis: 18.0%

Tuberculosis: 28.1%

In the county of Hidalgo, there are currently 129,880 people living in 868 colonias. Their lack of basic health and human services, environmental services, and capital improvements creates a third world environment in the U.S.- Mexico Border that has a significant impact on the quality of life of children and families. The needs of these forgotten people must be documented and presented to policy makers to highlight the deplorable living conditions and the adverse effects that these conditions have on the families in the colonias.

## The Solution

One viable solution is to develop a film documentary on colonia children that will use the media to present and illustrate to policy makers specific case studies of the deprecating conditions in which children live in the colonias. Our story will go to the colonias and investigate how the current living conditions impact families as they cope with very low incomes and high unemployment. We will also document how public resources are used to improve conditions and how the different sectors (i.e., public, private and non-profit) collaborate to assist the families residing in the colonias. This film will create a public awareness that will educate and inform communities and public policy-makers about the living conditions of children and families residing in colonias. We will interview state and federal policy makers and community leaders to identify legislation or other initiatives that are being undertaken to address the needs of the children and

families in colonias. The documentary will be presented and disseminated throughout the nation, including communities in the U. S.- Mexico Border.

## **Implementation**

Dr. Jamie Chahin, project director, at the Department of Social Work and Walter Richter Institute of Social Work Research at Southwest Texas State University and Hector Galan of Galan Productions Inc. Television Films will collaborate in the development of the film documentary. Dr. Chahin has over twenty years experience in working with special populations ,and Mr. Galan has over ten years experience in producing film documentaries. In addition, the project will include an advisory committee of scholars, including Dr. Ricardo Romo, Dr. Blandina Cardenas, and Dr. Arturo Madrid who will review and evaluate the quality of the subject matter and authenticity of the film.

# Children of the Colonias: Goals

1. A virtual reality website will be developed to provide policy makers with an opportunity to observe live health and education and quality of life of children in the colonias.
2. The award winning photographer, Alan Pogue, will be involved in teaching children to illustrate their current living conditions using photography.
3. A legislative summit for state and federal legislators will be held to educate and inform policy makers on the pertinent policy issues for children and families in the colonias.
4. Children of the Colonias is planned as a one-hour documentary to be aired on PBS prime time schedule. The program will be single episode filmed in broadcast quality Beta SP. Using a combination of stunning photography, enlightening interviews, rich archival footage and stills, and impressionistic filming, the film will document the life of children in the colonias

Within a period of eighteen months, the production of Children of the Colonias will be completed. The project will begin once funding for the project has been confirmed.

## **Implementation Schedule**

*September 1 - December 15, 1998 -- Pre Production*

During the pre-production, the producer and Dr. Jaime Chahin will consult with scholars and other experts on the subject matter of the film to prepare a final shooting script. This period will also involve (1) researching additional individuals and scholars who may provide on camera interviews with key individuals and scholars who may provide on camera interviews: (2) conducting pre-interviews with key individuals; (3) planning for principal photography: (4) scouting a variety of locations: and (5) assembling the key field production team. Mr. Galan has a set crew form which he can select the appropriate personnel. A revised shooting script will be produced at the end of the pre-production phase and circulated to the project team for their review and comments. An extensive computer database will also be created to track of the archival materials which will be identified for use in the project.

*January 15 - May 15, 1999-- Principal Production*

The final logistic planning for all the principal photography will occur in January 1999, with filming occurring between mid-March through mid-May. The children, parents, and various witnesses will be interviewed to verify the personal experiences of families. During field production, a still photographer will document key scenes throughout the production process. Local media will also be contracted when filming on location for feature stories and interviews to create early awareness of and interest in the project. Throughout this phase, the production team will also continue to screen, catalogue, and organize materials when not shooting.

*May 15 - September 15, 1999 -- Post Production*

As production footage is received from the field, we will transfer the beta master to digital tape and edit off-line on a non-linear editing system. After the principal photography is completed, the editing team will be identified and hired. The producers will review the first assembly and rough cuts. The selected scholars will review the finished rough cut as soon as it is available. The post-production team will conduct any additional interviews and field shooting which could not be scheduled during the earlier production period. Once a near -final cut of the program is finished, the production team will review that cut, and video cassette copies of the version will be sent to scholars and other consultants for their final review. Once we receive the comments of the scholars, we will complete final adjustments in the show. We will secure all rights to the acquired materials during this period. The project logo, score, sound effects, and graphics will be produced. The narration and voice-overs will be recorded and edited on their appropriate sound tracks.

*September 15 - November 15, 1999 -- Final Post-Production and Documentation;  
Promotion/Publicity/Education and Distribution/Marketing Plans*

We will complete the final sound mix and in consultation with PBS, produce the master program on D2 or some other digital format. During this phase, the titles, production, and funding credits will be incorporated. A computer database will include music and visual cue sheets, releases, rights, and other documentation of the project. The press will receive screening dubs. During this phase, the promotional, publicity, educational, and ancillary materials will be produced. The appropriate member of the production team will complete the specific plans in each of the aforementioned areas.

*December 1999*

The film will be presented at key conventions, including the National Education Association, the G.I. Forum, the National Association of Latino Elected Officials, the National Council of La Raza, the Public Broadcasting Services, and the regional organizations with an interest in the subject matter. The film will also be presented to the Los Angeles television critics' tour. Print press materials will be designed, researched, written and printed, in coordination with the PBS Scheduling and Publicity offices. A

long-lead press event will be planned for several key cities. The premiere broadcast of the film will be on PBS.

Southwest Texas State University and Galan Productions will collaborate on this project. In addition, the project will involve Southwest Texas State University local social work and film students, community based councils, leaders from the colonias, and national Latino organizations that address policy issues, including the Congressional Hispanic Caucus, NALEO, G.I. Forum, and the National Council of La Raza.

# Members



**Dr. Jaime Chahin** - Principal Investigator, Dean, College of Applied Arts at [Southwest Texas State University](#)

Jaime Chahin, Dean of the College of Applied Arts, at Southwest Texas State University, has over twenty years of varied experience in education. During the last ten years he has been an administrator and holds a teaching appointment at Southwest Texas State University. Prior to that, Dr. Chahin was a Senior Policy Analyst for the Select Committee for Higher Education in Texas which reported its findings to the legislature in 1987. From 1980 to 1986, Dr. Chahin was Dean of Student Personnel Services and Research at Texas Southmost College in Brownsville, Texas. In addition, he was an instructor in the Education Department at University of Texas at Brownsville.

Dr. Chahin, a 1971 graduate of Eagle Pass High School, received his Ph.D. in Education Administration in 1977 and his M.A. in 1975 in Administration and Policy from the University of Michigan. His B.A. degree in Sociology and Political Science was awarded in 1974 from Texas A & I University. He completed Post Doctoral work in Higher Education Management in 1980 and 1983 at Harvard University. In 1996, he was awarded a fellowship to attend the Salzburg Seminar in Austria to study Sustainable Communities.



**Blandina Cardenas-** Associate Professor of Educational Leadership at [University of Texas at San Antonio](#)

Blandina Cardenas is the chairperson of the Board of Trustees of the Educational Testing Service, a founding member of the Board of the Fundacion Solidaridad Mexicana Americana, a member of the Board of the American Association of Higher Education, and a leader of numerous state and local organizations in education, voting rights, public service, leadership development and children's concerns.

From 1989 to 1992, she served as Director of the Southwest Center on Values, Achievement and Community in Education, affiliated with the LBJ Institute at Southwest Texas State University. She came to SWT after three years as Director of the Office of Minorities in Higher Education at the American Council on Education. In January of 1993, she completed her second six-year term as a member of the United States Commission on Civil Rights.

A native Texan, Dr. Cardenas received her Bachelor of Journalism Degree from the University of Texas at



Austin and her Doctorate in Education Administration from the University of Massachusetts at Amherst.

In December of 1991, she was inducted into the "Orden del Aguila Azteca" the highest honor given by the Government of Mexico to a non-citizen of that country.



**Jim Estrada-** President & CEO of [Estrada Communications Group, Inc.](#)

Jim Estrada is President and Chief Executive Officer of Estrada Communications Group, Inc. (ECG). Specializing in the U.S. Hispanic market-ECG is recognized as one of the top corporate and marketing communications agencies in the nation.

Estrada is a pioneer in ethnic marketing, with over 30 years of corporate marketing and community relations experience. He has provided professional consultation in Hispanic marketing to many of the top corporations and community organizations in the country.

Prior to founding ECG, he was a News Reporter and Public Affairs Director for the ABC television affiliate in San Diego, CA.-he continued his television career in documentary production for McGraw-Hill Broadcasting in New York. He then moved to McDonald's Corporation as Western Region Advertising/Public Relations Manager. Estrada served as Manager of Corporate Relations at Anheuser-Busch Companies and was promoted to National Hispanic Brand Marketing for Anheuser-Busch in St. Louis, MO.

Estrada majored in Journalism at San Diego State University and has completed advanced studies at Boston College's Center for Corporate Community Relations. He is the recipient of many awards and honors, among them: Robert F. Kennedy Journalism Award, Washington, D.C.; Hispanic Women's Network of Texas; Mexican-American Foundation, California; Texas Association of Mexican-American Chambers of Commerce; and the Texas House of Representatives.



**Hector Galan-** President/Director of [Galan Productions, Inc.](#)

Nationally recognized documentarian, Hector Galan, has been involved in television for over twenty years. Starting out as a camera operator in his hometown of San Angelo, Texas, he has since been involved in every aspect of television production, now contributing programs to national networks.

A promotion to directing news at an NBC affiliate in Lubbock, Texas in 1975 would mark the beginning of his interest in news and public affairs. From news, he moved to Public Television where he began producing and directing public affairs and cultural programming. He entered into national documentary programming in 1980 when he became senior producer for the nationally acclaimed "Checking it Out" series, a documentary news magazine for Hispanic teenagers. Galan also completed a half-hour documentary "The End of the Race," about the Pueblo Indian cross-country runners of New Mexico. In 1992, while at Warner-Amex in Dallas, Galan was instrumental in producing "Qube" interactive cable

programming. This was followed by his selection as a staff producer for the award-winning, provocative "Frontline" series at WGBH-TV, Boston, a forum for news and public affairs programming.

Since reaching the national level, he has worked non-stop producing and directing a variety of long-form documentaries and specials, earning him awards from The American Film and Video Festival, National Educational Film and Video Festival, the New York International Film Festival, and many others.

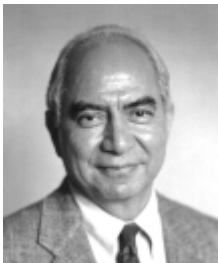
In 1996, Galan was invited to a private screening of his most recent documentary at the White House for President Clinton. In 1997, he received the Most Outstanding Alumni Award from Texas Tech University.



**Jorge Chapa-** Director of the Department of Latino Studies at [Indiana University at Bloomington](#)

Dr. Chapa is on leave from his position as Associate Professor of Public Affairs at the Lyndon B. Johnson School, University of Texas, Austin. Professor Chapa is a demographic specialist whose teaching and research interests include: population perspectives on policy analysis, race relations, minorities in higher education, and applied demographic analysis. His areas of expertise include statistics, demography, economic development, and information systems for data processing and analysis. Among his publications are a co-authored book, [The Burden of Support](#), which analyzes the social, economic, and political consequences of ethnic population trends in California. Chapa has authored numerous journal articles, reports and technical papers. The main focus of his research is Hispanic population characteristics and growth, and implications of these on different aspects of U.S. social policy.

Chapa previously served as Associate Dean at U.T. Austin, Associate Dean of the Office of Graduate Studies, and Director of the Graduate Opportunity Program (GOP). He has also been responsible for the recruitment and retention of minority students in all of U.T. Austin's graduate and professional programs, except for the School of Law.



**Arturo Madrid-** Professor of the Humanities at [Trinity University](#)

Arturo Madrid is the Norine R. and T. Frank Murchison Distinguished Professor of the Humanities at Trinity University, a position he has held since 1993, and a 1996 recipient of the Charles Frankel Prize from the National Endowment for the Humanities. From 1984 to 1993, he served as the founding president of the Tomas Rivera Center, a national center for policy studies on Hispanic issues affiliated with the Claremont Graduate School (California) and Trinity University (Texas). From 1975 to 1980, he was the founding president of the National Chicano Council for Higher Education.

Dr. Madrid holds a B.A. with honors from the University of New Mexico, where he was elected to Phi Kappa Phi, the national scholarship society. Upon graduation, he was awarded a prestigious Woodrow Wilson Fellowship to pursue graduate studies in Hispanic Languages and Literatures at UCLA. Since completing his doctorate, Arturo Madrid has held academic and administrative appointments at Dartmouth

College, the University of California, San Diego, and the University of Minnesota.

Madrid is an elected fellow of the Council of Foreign Relations, the nation's premier foreign policy association, and of the National Academy for Public Administration, which honors persons with distinguished records in public administration. He currently serves on the Board of Directors of the A.H. Belo Corporation (Texas), the Center for Southwestern Studies (SMU), the Intercultural Research Development Association (San Antonio), the Tandy Technology Scholars Program, the San Antonio Museum of Art, and the Arte Público Press.



**Julissa Ozuna-** Grant Administrative Assistant at [Southwest Texas State University](#)

Julissa Ozuna, a native of Progreso, Texas, is currently the Grant Administrative Assistant for the "Children of the Colonias" project that was funded to Southwest Texas State University (SWT) by the W.K. Kellogg Foundation. She completed her undergraduate studies in August 1998, from SWT and earned a Bachelor of Business Administration with an emphasis in Management. Julissa is currently working on her Master of Accounting (MAcy).

Julissa was nominated for The Who's Who Among American College Students throughout her four years of college. She was the Treasurer of the Hispanic Business Student Association and member of the National Hispanic Business Conference in Austin, Texas, in which she was awarded the Member of the Year award in 1997. She was also a member of the American Marketing Association and the Ballet Folklorico Ocotochli de SWT.

While she attended SWT, Julissa was a mentor to local high school students. She also assisted high school students, from different surrounding counties, in postsecondary institutions, to apply for college admission, financial aid, and scholarships to attend higher education institutions.



**Manuel Piña, Jr. -** Special Projects Director, The Agricultural Program at [Texas A&M University System](#)

Manuel was born and reared on his family farm in McCulloch County, Texas. For twenty-five years, he has made education and evaluation related to international agriculture research and rural development, along with leadership development programming and external grants management, his career and expertise. He has developed, carried out, and evaluated formal and non-formal educational programs in and outside the U.S. and has special interest in facilitating that the U.S. educational system is responsive and sensitive to needs of Hispanic youth.

His present position is President and CEO of Views Unlimited, Inc., which specializes in assisting non-profit organizations in developing and funding, evaluating and managing programs and projects. He is also an Associate Professor of the Department of Agricultural Education at Texas A&M University College Station, Texas. Piña teaches graduate courses and conducts research in international development. He is the Project Director for three Texas A&M University System-wide initiatives to promote adjustments in the

higher education system of the state, and to ensure its relevancy in the 21st century.

His education includes: the Graduate School of Business Administration (Program for Management Development), Harvard University, February - May 1985; Ph.D. Adult Education (Extension), Texas A&M University, 1978, thesis "Teaching Skills Essential for Subject-Matter Specialists of the Texas Agricultural Extension Service, by Program Areas"; M.S. Educational Administration, Texas A&M University, 1974, thesis "Factors Which Affect Decision Making of Public Information Radio Tape Service by Spanish-Language Broadcasters in Texas"; B.S. Agricultural Education, Texas A&M University, 1968; B.S. Agricultural Journalism, Texas A&M University, 1968.



**Alan Pogue-** Photographer for Las Colonias Project

Alan Pogue began his photographic documentarian career in 1968, while as an Army chaplain's assistant and a combat medic in Vietnam. His interest in the photographic medium and social justice were merged there, never to be separated in the decades to come. Alan studied philosophy as an undergraduate at the University of Texas at Austin during 1969 to 1971. At the same time, he became staff photographer for *The Rag*, an anti-war, civil rights, gender and sexual orientation equality advocate which belonged to a national network of such publications. In 1972, Alan became a contributing photographer for the *Texas Observer*, a bi-weekly political and literary journal. He became the staff photographer and in 1997, was the recipient of its first Tyrants Foe Award.

1975 marked the beginning of his two largest bodies of work, farmworkers and prisoners. He worked with both The Texas Farmworkers and the United Farm Workers. Alan provided still photography and videography for C.U.R.E., a national prison reform group, formed in Texas. Peoples History in Texas asked for Alan's assistance in making "Women in Texas Labor: An Oral History, 1930 to 1950." He did all of the still photography and videography for the length of the project from 1976 to 1979, which then became a full length film, video, and book.

In 1980, a group of prominent Austin artists invited Alan to have his first major solo exhibition, at the Bois D'Arc Gallery, "Photographs: Alan Pogue." In 1983, The Center for Mexican-American Studies at the University of Texas sponsored the production of a portfolio of Alan's original prints, "Agricultural Workers of the Rio Grande/Rio Bravo Valley," which were limited editions. In 1983, the Texas Institute of Letters selected Alan for the Dobie/Paisano Award, a six month residency at the J. Frank Dobie Ranch. In 1984, attorneys for the NAACP hired Alan to document inhumane prison conditions for use by plaintiffs in the historic "Ruiz vs. Estelle" prison reform case, and the Mexican American Legal Defense and Education Fund (MALDEF) hired Alan to document the inequality of educational opportunity in Texas for the landmark "Edgewood vs. Kirby" school funding case.

In 1988, the National Center for Farmworker Health commissioned Alan to produce a national photographic survey of farmworker conditions and an exhibition, "America's Migrant Farmworkers," which is still touring the country. The U.S. Public Health Service gave Alan the "Director's Special Citation" award for this exhibit. In 1997, the *Austin American-Statesman* and *The Austin Chronicle* named Alan the best photographer, documentarian, photojournalist, and artist in Austin. A complete list of Alan's publications, awards, and exhibitions are available on request.



**Ricardo Romo**- President - [University of Texas at San Antonio](#)

Ricardo Romo, a native of San Antonio, Texas, completed his undergraduate studies at the University of Texas at Austin and earned his doctorate in History at the University of California, Los Angeles. From 1974 to 1979, Professor Romo taught at the University of California at San Diego; he then began teaching in the Department of History at the University of Texas at Austin, in 1980. He has served as Vice President and Director of the Texas office of the Tomas Rivera Center, a Latino public policy institute (1988-93), a Fellow at the Center for Advanced Studies in the Behavioral Studies at Stanford University (1989-90) and a Chancellor's Distinguished Lecturer at the University of California, Berkeley (1985). He is currently Vice Provost in the Office of the Executive Vice President and Provost at the University of Texas at Austin and a member of the Department of History.

Professor Romo's most recent essay, "The Civic and Political Incorporation of Mexican Americans: A Historical Perspective," is forthcoming in *Immigration, Race and Ethnicity in America*, edited by Silvia Pedraza and Ruben G. Rumbaut; Wadsworth Press. His book, *East Los Angeles: History of a Barrio*, a University of Texas publication, recently went into its seventh printing. He is also co-author of *The Mexican American Experience: An Interdisciplinary Anthology*. His name appears in the *International Authors and Writers Who's Who*, *Contemporary Authors*, *Who's Who in Hispanic America* and *Who's Who in American Education*.



**Galen Lucia Dickey** - Grant Research Specialist at [Southwest Texas State University](#)

Galen Lucia Dickey graduated from the University of Texas at Austin and holds a Masters degree in Massachusetts School of Public Health. She has worked in community health education for the past 8 years as a health educator and researcher.

Her research interests focus on health issues of marginalized populations. Galen presented a paper on Exposure Injury and Death in Gallup, New Mexico at the Annual Meeting of the American Public Health Association in 1995. She also presented Las Colonias Project Team Integrated Violence Prevention in a Middle School Health Curriculum at the same meeting. Most recently, she presented findings from a focus group of Hispanic colorectal cancer patients and their families at the conference for the National Coalition of Hispanic Health and Human Services Organizations. She spent six months in Mexico studying methods of community organization and social change. While in Mexico, she also learned about the traditional use of herbs from a group of promotoras practicing popular medicine in Nueva Rosita, Coahuila.



**Sandra Peralta-** Grant Research Specialist at [Southwest Texas State University](#)

Sandra Peralta, a native of El Paso, Texas, and a business major graduate from the University of Texas at El Paso. Sandra has extensive experience in statistical and research analysis coupled with computer programming knowledge. The majority of her work experience has been with the federal government under the Department of Defense. Sandra has chaired and managed numerous programs within her federal working career. She chaired the Hispanic Employment Committee Program for almost 4 years; served as the Savings Bond Campaign Manager and Combined Federal Campaign Manager. In managing these programs she serviced over 25,000 federal civilian employees and military soldiers. Sandra is active in her community. She is a Mexican American Legal Defense and Education Fund (MALDEF) leadership development graduate. She is a past member of the National Image and Federal Managers Association. She currently serves as the secretary of Youth Advocates, of El Paso Incorporated.



**Cristina Salinas-** Grant Research Assistant at [Southwest Texas State University](#)

Cristina Salinas is conducting research in the Rio Grande Valley and in Austin for the Children of Las Colonias project. Cristina was appointed jointly by Dr. Jaime Chahin and Mr. Hector Galán. Cristina is a native of Elsa, Texas and the daughter of Armando and Delia Salinas. After graduating from Edcouch-Elsa High School in 1993, she continued her education at the University of Texas at Austin, where she received a bachelor of arts degree with high honors in history. Her future plans include studying immigration history in graduate school.

Web Design Provided by [Greg Goodman](#) of Rio Design

# Introduction

The Texas State Population Estimates and Projections Program's projections of the population of Texas and of each county in Texas were prepared by personnel from the Department of Rural Sociology in the Texas Agricultural Experiment Station in the Texas A&M University System. These projections, like all projections, involve the use of certain assumptions about future events that may or may not occur. Users of these projections should be aware that although the projections have been prepared with the use of complex and detailed state-of-the-art methodologies and with extensive attempts being made to account for existing demographic patterns, they may not accurately project the future population of the State or of particular counties in the State. These projections should be used only with full awareness of the inherent limitations of population projections in general and with particular and detailed knowledge of the procedures and assumptions delineated below which characterize the projections presented in this report.

The Texas State Population Estimates and Projections Program's projections are of the population of the State and of all counties in the State for each year from 1990 through 2030. They are thus similar in form to those released by the program in 1989, 1992, 1994 and 1996 (Texas Population Estimates and Projections Program, 1989, 1992, 1994, 1996) but have been substantially revised using post-1990 data and other enhanced data bases. They are by single years of age for ages 0 through 75 years of age and older for males and females in each of four racial/ethnic groups--Anglos, Blacks, Hispanics, and persons from Other racial/ethnic groups (the terms Hispanic and Spanish origin are used interchangeably throughout this report). These four groups have been configured so that the total population is the sum of Anglos, Blacks, Hispanics, and persons of Other racial/ethnic groups.

This summary provides a relatively detailed description of the projection methodology and then discusses the bases for, and the assumptions used in, creating the alternative projection scenarios. It concludes with a description of the products available from the projection process.

# Projection Methodology

The projections were completed using a cohort-component projection technique. As the name implies, the basic characteristics of this technique are the use of separate cohorts--persons with one or more common characteristic--and the separate projection of each of the major components of population change--fertility, mortality and migration--for each of the cohorts. These projections of components for each cohort are then combined in the familiar demographic bookkeeping equation as follows:

$$Pt_2 = Pt_1 + B_{t_1 - t_2} - D_{t_1 - t_2} + M_{t_1 - t_2}$$

Where:  $Pt_2$  = the population projected at some future date  $t_1 - t_2$  years hence

$Pt_1$  = the population at the base year  $t_1$

$B_{t_1 - t_2}$  = the number of births that occur during the interval  $t_1 - t_2$

$D_{t_1 - t_2}$  = the number of deaths that occur during the interval  $t_1 - t_2$

When several cohorts are used,

$$Pt_2 \text{ may be seen as: } n Pt_2 = \sum_{i=1}^n P_{ci, t_2}$$

Where:  $Pt_2$  is as in the equation above

$P_{ci, t_2}$  = population of a given cohort at time  $t_2$  and

$$P_{ci, t_2} = P_{ci, t_1} + B_{ci, t_1 - t_2} - D_{ci, t_1 - t_2} + M_{ci, t_1 - t_2}$$

In this, as in any other use of the cohort-component technique at least four major steps must be completed:

1. The selection of a baseline set of cohorts for the projection area or areas of interest for the baseline time period (usually the last census and for other dates for which detailed base data are available)
2. The determination of appropriate baseline migration, mortality, and fertility measures for each cohort for the baseline time period
3. The determination of a method for projecting trends in fertility, mortality and migration rates over the projection period



4. The selection of a computational procedure for applying the rates to the baseline cohorts to project the population for the projection period

Each of these steps as performed for the Texas State Population Estimates and Projections Program's projections are briefly discussed in the pages which follow.

# Selection of Baseline Cohorts

The baseline cohorts used in the projections are single-year-of-age cohorts for males and females of Anglo, Black, Hispanic and Other racial/ethnic groups extracted from Summary Tape File 2 from the 1990 Census of Population and Housing. Population data for 1990 were used as the starting base because they provide the last complete count information available.

The baseline cohorts used for the Anglo, Black, Hispanic and Other populations were obtained by subtracting the number of Spanish-origin persons by age, sex and race from the total population by age, sex and race. The cohorts thus produced are Anglos (composed of White Non-Spanish-origin persons), Blacks (consisting of Black Non-Spanish-origin persons), Hispanics (Spanish-origin persons of all racial and ethnic groups), and Others (composed of persons of other racial and ethnic groups who are not of Spanish-origin). So constructed, the sum of populations in the four racial/ethnic groups of Anglo, Black, Hispanic, and Other are equal to the total population. All cohorts are for single years of age for ages 0-75+ for both sexes for each of these four racial/ethnic groups.

Although the 1990 Census Count provided useful baseline data for the projections, there is clear evidence of problems in the reporting of age and race/ethnicity in the 1990 Census. Particularly evident was a shifting of roughly 20 percent of those 0-1 years of age to older ages and the inclusion in the Other category of persons who were Anglo, Black, or Hispanic. Because of this problem, the U.S. Bureau of the Census found it necessary to adjust the age and race/ethnicity data for 1990 and provided modification ratios by age, sex, and race/ethnicity for each State. Analyses by the Bureau indicated that these ratios were similar across states and areas within states. These ratios were applied to all counties and controlled to the total State's modified population. Appendix A provides a description of the procedure used by the Census Bureau to complete the age and race/ethnicity adjustment. These modifications do not alter the total population values for counties or the State, but because the Census Bureau reconstructed the modified populations from individual census records which contain inferred characteristics, values are changed from the published 1990 counts for some age, sex, and race/ethnicity groups. For most areas, the modification results in a reduction in the 1990 Other population and an increase in Anglo, Black, and Hispanic racial/ethnic categories.

It was also necessary to adjust the base population for "special populations". Special populations are populations who reside in an area, usually in institutional settings, who do not generally experience the same demographic processes over time as the indigenous population in the area. Rather, they tend to come into and leave an area at fixed intervals. Examples of such populations are college populations, prison populations, military base populations, and other persons in institutional settings. Because their movement into and out of an area is a function of events (e.g., enrollment, graduation, incarceration) which

are not determined by local socioeconomic conditions, special populations must be removed from the base populations of projection areas before birth, death and migration rates are applied to the base population. If special populations of substantial size are not removed, they will create distortions in age and other characteristics of the population that will remain in the population through the cohort aging process and create inaccuracies in the projections. Special populations are, therefore, generally removed from the cohort base, the base cohorts projected forward and a separate projection of the special population for the projection date is added to the projected base cohorts to obtain the projection of the total population.

In Texas, several continuing special population groups are especially large and must be removed from base populations. These are college and university populations, state prison populations, military populations, and populations in other State institutions. In the projections presented here, each of these groups was removed from the base population of the counties in which they are located by subtracting these special populations from the 1990 population reported in the Census (and modified as noted above) for these counties. Since these special populations must be subtracted from base populations that are age, sex and race/ethnicity specific, it was necessary to obtain age, sex and racial/ethnic detail for the special populations. This was done for the college populations by obtaining information on college enrollment for each public college and university in the State for 1990-1995 by age, sex and race/ethnicity from the Texas Higher Education Coordinating Board. For prisons, information on the age, sex and race/ethnicity of prisoners in each institution in 1990-95 was obtained from the Texas Department of Criminal Justice. For both college enrollments and prisons, projected values from the appropriate agencies (Texas Higher Education Coordinating Board and the Texas Department of Criminal Justice) for the periods after 1995 were incorporated in the projections. For other institutions, information on age, sex and race/ethnicity were obtained from the group quarters data from the 1990 Census STF2B file and updated with post- 1990 data.

For 1990, one additional special population group had to be removed from the 1990 base population before computing migration rates. This was the large population of illegal immigrants admitted under the amnesty provision of the Immigration Reform and Control Act (IRCA) of 1986. The group seeking amnesty in Texas was more than 400,000. To the extent that they were entrants into Texas since 1980 they are immigrants during 1980 to 1990, but assuming that IRCA's one time amnesty provision would be implemented periodically throughout the projection period was not feasible so that those who were not in Texas in 1980 or not counted in 1980 were removed from the base to eliminate an artificial inflation of migration rates. It is not clear what proportion of the IRCA admittees were counted in 1980 so it was uncertain how many should be subtracted from the base population. After extensive consultation with U.S. Bureau of the Census and U.S. Immigration and Naturalization Service demographers, it was decided that one-half would be assumed to have been counted in 1980 and one-half assumed to be one-time "special" event migrants and removed from the base before computing migration. However, because they are now permanent residents, unlike members of other special populations who are removed from the base population for purposes of computing future

births, deaths and migration, IRCA admittees were used in the base population for computing births, deaths and migration. They are treated as special populations only for the purpose of computing the base migration rates for 1980 to 1990.

Given the distributions of the special populations by age, sex and race/ethnicity, it was then possible to subtract the special populations from the baseline 1980 and 1990 Census cohorts to obtain a baseline set of cohorts free from the influence of special populations. These procedures for baseline cohorts were completed for all counties in the State. However, following standard practice special populations were removed from the base population only when they made up five percent or more of the population of the area. For counties with special populations of sufficient size, the baseline cohorts without special populations are projected forward and projections of special populations for the projection years are added to the projections for the baseline cohorts to obtain projections of the total population.

# Trends in Fertility, Mortality and Migration

## Projections of Fertility

### Fertility Rates

Age, sex and race/ethnicity specific fertility rates were computed using births by age, sex and race/ethnicity and place of residence of the mother. The numerators for such rates are the average number of births for 1990 and 1991 for mothers in each age and race/ethnicity group and the denominators are the modified population counts by age, sex and race/ethnicity. Birth data to compute the rates were obtained from the Texas Department of Health and data on women by age (10-49 years) and race/ethnicity were obtained from the modified data from the 1990 Census of Population. These data showed total fertility rates for Anglos, Blacks, Hispanics and the Other racial/ethnic group in 1990 that were 1.81, 2.37, 3.05 and 2.01 respectively.

To project future rates of fertility, county and State-level projections were assumed to follow historical patterns and trends. Since historic data on fertility were available only on Hispanic populations defined by Spanish surname, trends in fertility were based on 1980 to 1990 trends in fertility with all racial/ethnic groups' fertility defined such that the Spanish surname data were used to measure trends in Hispanic fertility. Evaluation of these age and race/ethnicity-specific fertility rates in Texas showed patterns of increased fertility among Anglos and Others during the first half of the 1980s followed by a decline from 1985 to 1990. Rates for Blacks showed increases from 1980 through 1985 and stable rates from 1985 to 1990. Hispanics (defined by Spanish surname) showed a decline in fertility from 1980 to 1985 and stability in rates from 1985 to 1990. Anglo total fertility rates were 1.78 in 1980, increased to about 2.0 in the mid-1980s and declined to a level of 1.81 by 1990. The Other racial/ethnic group has followed a similar pattern to that for Anglos with a total fertility rate of 1.71 in 1980 and 2.01 in 1990. The Black total fertility rate increased from 2.26 in 1980 to 2.48 by the mid-1980s and then declined to 2.37 in 1990. The total fertility rate of Hispanics (defined by surname) showed a decline from 2.97 in 1980 to 2.77 in 1990.

Given these patterns and the well established long-term pattern of decline in fertility in the United States and other nations (National Center for Health Statistics, 1991) and the decline in fertility among Anglos and Others from 1985 to 1990 and for Hispanics during the 1980s in Texas, fertility patterns were trended downward over the projection period. A review of 1990-96 patterns of fertility, however, suggested that these rates should be assumed to continue at 1990 levels until 1995 and then be trended downward. Thus, fertility was assumed to remain at 1990 levels until 1995 and then trended in the manner described below. The declines were applied to the fertility of racial/ethnic groups with base Hispanic fertility defined in terms of Hispanic-origin in 1990 being projected

relative to the 1980-90 percentage change found in the data for persons with Spanish surnames. For Anglos, the 1990 total fertility rate (TFR) of 1.81 was assumed to reach the total fertility level of 1.65 by 2010 and remain at 1.65 for the remainder of the projection period. For the Other population group, fertility is assumed to follow trends similar to those for Anglos declining from 2.01 in 1990 to 1.86 in 2010, and 1.79 in 2020 and 1.75 in 2030. Black rates were assumed to show continuous decline from a total fertility rate of 2.37 in 1990 to 2.14 in 2010, 2.03 in 2020 and 1.93 in 2030. Hispanic fertility was assumed to decline at the rate of the 1980 to 1990 period (measured in terms of Spanish surname fertility) resulting in an assumed decline from 3.05 in 1990 to 2.65 by 2010, 2.47 by 2020, and 2.31 by 2030. Total fertility levels were interpolated for intermediate years between the target years and age and race/ethnicity specific rates for women 10-49 years of age developed for each TFR for each year assuming the age structure of fertility for 1990. This produced State-level age and race/ethnicity specific birth rates for each year from 1990 through 2030.

For the projections reported here, single-years of age, sex and race/ethnicity specific fertility rates and total fertility rates for 1990 were computed for counties using the data and procedures described above. The counties' trends in fertility for the projection period from 1990 to 2030 were then projected by assuming that the county's future fertility would follow the State trend.

Specifically, this involved computing a ratio between the age and race/ethnicity specific birth rate for each age and racial/ethnic group for each county and the comparable State age and race/ethnicity specific birth rate for 1990-91. This ratio for each age and race/ethnicity specific birth rate for each county was then multiplied by the projected State rate for each of the projection years with the State rates used in the multiplication being those with the trends noted above.

## **Projections of Mortality**

### **Mortality Rates**

To obtain baseline mortality measures, survival rates by single years of age, for both sexes and for each of the racial/ethnic groups were needed. Survival rates for Anglos, Blacks, Hispanics, and the Other racial/ethnic category were computed using death data from the Texas Department of Health. County specific survival rates were computed for all counties with 100,000 or more population in 1990. For all other counties rates specific to their county type (i.e. metropolitan central city county, metropolitan suburban, nonmetropolitan adjacent and nonmetropolitan nonadjacent) were employed.

The projections of mortality for the projection period were made with county and state rates being assumed to follow national trends for the projection period and 1989-91 county and state age, sex and race/ethnicity survival rates being ratioed to national age, sex, and race/ethnicity specific survival rates. The national rates were obtained from the Population Projections Branch of the U.S. Bureau of the Census and reflect recent longterm projections of mortality (as reported in P-25, No. 1104, October, 1993).

Survival rates were ratioed to the projected survival rates for the Nation. The national projections used show a life expectancy for Anglo males of 73 in 1990, and 81 by 2050. For Anglo females the values were 80 and 86. The values for Black males were 66 and 71 and for females were 74 and 79. The life expectancies for Hispanics were 75 and 81 for Hispanic males and 83 and 87 for Hispanic females. For Others the values were 78 years for males for 1990 and 85 for 2050, and 85 and 91 for females. Life table survival rates for the State and counties for 1990 were ratioed to national rates for 1990 and these rates applied to projected national rates for each year from 1991 through 2030.

## **Projections of Migration**

### **Migration Rates**

Migration is the most difficult component process to project and for which to obtain baseline rates. For the Texas State Population Estimates and Projections Program's projections, rates were derived using a standard residual migration formula. Thus, life-table survival rates by age, sex, and race/ethnicity were applied to 1980 modified census data to produce expected populations for 1990 and subtracted from the modified 1990 populations counts to produce an estimate of net migration for use in the 1980s-based scenarios. A set of rates were also developed for use with a fourth, 1990s-based scenario. These rates were determined by taking 1990 base cohorts, subtracting deaths, and adding births to the beginning of life cohorts for the period of 1990 to 1996 to determine total 1990-96 net migration levels. These net migration values were distributed to age, sex, and race/ethnicity specific groups on the basis of 1985-90 rates of migration derived from the county-to-county migration data from the 1990 census (U.S. Bureau of the Census 1995). These data were only recently released and provide data on the age, sex and race/ethnicity characteristics of in and outmigrants to and from every county. Although the absolute migration levels from 1985 to 1990 are not seen as likely to be indicative of Texas longterm patterns of growth, the age, sex and race/ethnicity proportions of migrants were examined and appear to reflect reasonable patterns by age, sex and race/ethnicity. Thus these proportions were used to distribute total net migration values to age, sex and race/ethnicity groups. These distributed values were divided by expected values to estimate 1990-96 patterns of age, sex and race/ethnicity patterns of net migration. These rates were converted to single-year rates for use in the projections.

The migration component is the most difficult to project. For the Texas State Population Projection Program's projections, the age, sex and race/ethnicity specific net migration rates (calculated in the manner described above) were used to arrive at three alternative scenarios of growth (described in the following pages) by systematically altering the assumptions related to the entire set of age, sex, and race/ethnicity specific net migration rates. A fourth scenario was employed which assumed a continuation of 1990-96 rates of net migration. No attempt was made to develop separate scenarios for specific age groups or to formulate scenarios using different assumptions for each of the racial/ethnic groups. Several alternative scenarios were examined, including a net outmigration scenario. However, given recent estimates showing continued growth in the State and long-term projections of economic growth, the four scenarios described below were deemed to be the most likely to characterize the long-term future of the State.

## **Special Considerations in the Projection of Component Rates**

The computation and projection of fertility and migration rates at the county level were sometimes problematic for counties with small population bases. Given the use of 4 racial/ethnic groups, 2 sexes and 75 age groups, a total of 600 cells of data were employed for each county. In counties with small populations in which either the baseline population used as the denominator to compute rates and/or the number of events used in the numerator (i.e., births or net migrants) was too small to produce reliable and reasonable rates, it was necessary to develop a means of obtaining reasonable rates.

In order to obtain reasonable rates for counties for which problems were identified, rates for larger groupings of areas with characteristics similar to the counties for which alternative rates were necessary were used to develop homogenous groupings of areas. Council of Government Regions and county types within regions were used. All counties within Council of Government (COG) regions were thus divided into four groups-- metropolitan central city counties, metropolitan suburban counties, nonmetropolitan counties that are adjacent to metropolitan counties, and nonmetropolitan counties that are not adjacent to metropolitan counties. The rates for these groupings were used because analysis indicated that the rates for these 4 types show substantial homogeneity across areas within each grouping but substantial differences among the groupings. Rates were completed for each of these four county types within each region and for the four types for the State as a whole (by using the aggregate populations of counties within each type within each region and/or the total State population by type).

For counties with problematic rates, rates for the county type of which the county was a member for the COG region where the county was located were substituted only for the problematic rates for those age, sex, and race/ethnicity groups for which the rates computed with the county's own population data were deemed to be problematic. For a few regions for a few racial/ethnic groups, even the COG rates were problematic. In such cases, the State rate for the county type was substituted for the county rate. Finally, in a very few cases even the state-level status was not acceptable and the overall state rate for the racial/ethnic group was used. It is important to stress that this procedure does not result in the rates for all age and sex groups for a given racial/ethnic group being replaced by regional or State averages. Rather, replacements are made for only those rates for age, sex, and racial/ethnic cohorts within counties which had problematic values. Thus, county-level differentials in demographic patterns are maintained in the population projections.

Counties were deemed to have unreasonable age-specific fertility rates if they exceeded the mean rates for an age race/ethnicity group for the county type of which they were a part by more than two standard deviations or were greater than 25 percent for any single year for any age, sex and race/ethnicity group. State-level age specific fertility rates for the county types were used for substitutions for fertility because of instability even in COG level rates. In addition, data on the fertility levels of women in the Other group



indicated that only three counties in the State--Harris, Dallas and Tarrant--had age-specific rates that were sufficiently stable to be used in the projections. For all other counties, the age and race/ethnicity specific rates used for the Other racial/ethnic group were the State-level age, sex and race/ethnicity specific rates for the Other race/ethnicity group.

Migration rates are more variable across areas such that the use of means was not possible and would have improperly altered rates for rapidly and slow growing areas. Limits were used instead of statistical means. These limits were based on the upper and lower limits seen as feasible for migration. Unreasonable migration rates were designated as those in which per-person-per-year rates were 0.10 or greater (a rate that allows up to 10% migration per single-year age group per year). Since migration rates can have either positive or negative values, this allowed migration rates to vary between -0.10 and 0.10 per-person-per-year for each age, sex and race/ethnicity cohort. The counties identified as having problematic fertility and/or migration rates were largely nonmetropolitan, most with relatively small populations.

Although the procedure described above was generally adequate for rate adjustments, for some counties the migration rates were problematic in yet another manner. The use of historical rates often resulted in substantially higher rates of net migration for one sex than the other. Such an imbalance could not be expected to continue over the entire projection period. The ratio of male rates relative to female rates for each age was examined by computing means for each ratio and analyzing standard deviations for such means. From this analysis, it was decided that a ratio greater than 2 should result in a replacement of the migration rate. Given this, rates were adjusted to be no larger than twice the ratio of male to female rates at the COG and State levels within county types for the same age, sex, and race/ethnicity group (i.e., metropolitan central city, metropolitan suburban, nonmetropolitan adjacent, and nonmetropolitan nonadjacent). If the ratio of male to female migration rates for a county of a given type for any age exceeded this limit for the COG type, its rate for that age, sex, and race/ethnicity was replaced with that for the county type for the COG. If the COG's rate for the county type was still problematic, the rate for that county type for the State as a whole was substituted for the county rate. Again, as for fertility and mortality rates, for a very few rates for a few areas even state-level county-type specific rates were unacceptable and state-level rates by age, sex, and race/ethnicity were used. The use of this procedure resulted in substantially more balanced sex ratios in the final projections.

# **The Computation and Selection of Future Projection Scenarios**

In this section, both the assumptions underlying the projection scenarios and the final computational procedures are described. For both, the emphasis is placed on the logic underlying the scenarios and procedures rather than on the detailed computational processes. Those interested in greater detail may consult several readily available references on the subject (Murdock et al., 1987; Pittenger, 1976; Murdock and Ellis, 1991a) or may contact the personnel involved in the Projection Program in the Department of Rural Sociology at Texas A&M University.

## **The Projection Scenarios**

Four projection scenarios which produce four alternative sets of population values for the State and each county are presented in these projections. These scenarios assume the same set of mortality and fertility assumptions in each scenario but differ in their assumptions relative to net migration. The net migration assumptions made for three scenarios are derived from 1980-90 patterns which have been altered relative to expected future population trends (see Murdock and Ellis, 1991b). This is done by systematically and uniformly altering the adjusted (as noted above) 1980-90 net migration rates by age, sex and race/ethnicity. The scenarios so produced are referred to as the zero migration (0.0) scenario, the one-half 1980-90 (0.5) scenario, and the 1980-90 (1.0) scenario. The fourth scenario assumed a continuation of 1990-96 patterns of net migration.

### **The Zero Migration (0.0) Scenario**

The zero scenario is a scenario which assumes that immigration and outmigration are equal (i.e., net migration is zero) resulting in growth only through natural increase (the excess or deficit of births relative to deaths). This scenario is commonly used as a base in population projections and is useful in indicating what an area's indigenous growth (growth due only to natural increase) will be over time. In general, this scenario produces the lowest population projection for counties with historical patterns of population growth through net immigration and the highest population projection for counties with historical patterns of population decline through net outmigration.

### **The One-Half 1980-90 Migration (0.5) Scenario**

This scenario has been prepared as an approximate average of the zero (0.0) and 1980-90 (1.0) scenarios. It assumes rates of net migration one-half of those of the 1980s. The reason for including this scenario is that many counties in the State are experiencing rates of population growth below the overall levels of growth of the 1980s but are showing some immigration (i.e. growth greater than the 0.0 scenario). A scenario which projects

rates of population growth that are approximately an average of the zero and the 1980-90 scenarios is one that suggests slow but steady growth.

## **The 1980-90 Migration (1.0) Scenario**

The 1980-90 scenario assumes that the trends in the age, sex and race/ethnicity net migration rates of the 1980s will characterize those occurring in the future of Texas. The 1980s was a period characterized by early and rapid growth followed by very slow population growth at the end of the decade. It was previously presented (in 1992) as the high growth alternative because its overall total decade pattern was one of substantial growth (i.e., 19.4% for the 1980-90 decade for the State). Although higher rates of net immigration were experienced during the 1970s and from 1980 to 1985, a majority of counties in the State had rates of growth substantially below the 1970-80 or 1980-85 rates for the 1980s, and it was deemed unlikely that most areas in the State would be able to return to higher rates of growth than the overall trends of the 1980-90 period in the future. Thus, this scenario produced the highest projected populations for those areas which had net immigration during the 1980s. For counties that experienced net outmigration during the 1980s, this scenario produced continued decline. While it is no longer the highest growth scenario, it has been maintained because it appears to characterized the growth patterns of many counties in the State.

## **The 1990-96 Migration (90-96) Scenario**

The 1990-96 scenario shows rates consistent with 1990-96 patterns of net migration. These patterns generally show higher rates of Anglo migration than in the 1980s and slower rates of minority population growth. They may be particularly useful for those counties with post-1990 patterns that are substantially different than those for the 1980s.

Although each of these projection scenarios is based on reasonable alternatives of population growth, users of these data should be aware that projections are inherently speculative and that no assurance can be provided that these scenarios will correctly predict or even bracket the actual level of future population growth in the State. In addition, because of the variability of population patterns among the counties in the State, users should be aware that the scenarios are likely to be more accurate for some areas than for others.

## **Computation of Future Populations**

Given the projected rates and scenarios noted above, the computation of the projected population was completed using standard cohort-component techniques as described above with all computations being completed on an individual year and age basis for each sex and racial/ethnic group. Base population values for 1990 were used as the starting values and populations were projected for each year from 1991-2030. Because of the need to ensure that the sum of county projections produces reasonable future populations for the State as a whole, the State's future population by age, sex and race/ethnicity was

first independently projected under each of the scenarios described above. County base cohorts were projected to the projection date and projected special populations added to the projected base populations for the appropriate counties. Projected populations of colleges and universities for future years were taken from projections by the Texas Coordinating Board for Colleges and Universities (1997), values for existing prisons and projections for prisons to be opened through 2000 were obtained as of December 19, 1997 from the Texas Department of Criminal Justice in correspondence form. Military institutions' populations were updated to 1995 levels. All other institutions were maintained at 1990 levels. The State-level projections were then used as control totals for the sum of county projections for each age, sex and racial/ethnic group. The projections so produced and controlled for each scenario are those provided here as projections of the population of the State and of each county in the State.

## **Data Available from the Projections**

The data produced in the process of completing the projections presented here and the data summarizing the projections themselves are extensive. The amount of data available for the State and each of 254 counties for four scenarios of growth, for each year from 1990 through 2030 for each of 75 age groups for 2 sexes and 4 racial/ethnic groups is too voluminous to be provided in its entirety in printed form. Thus, data are provided in several different forms to address the needs of different user groups.

This publication describes the projection methodology and provides several appendices showing the base populations for the State for 1990, and the base rates for fertility, mortality and migration for 1990 for the State. Due to the volume of data involved, rates for other years and areas will be provided only on request.

Because of the volume of data, printed data are provided only on request. The fully detailed projections of the population in each age, sex and racial/ethnic group for each county and the State for each year from 1990 through 2030 are available either on computer tape for the State and all counties in the State or on floppy disks for the State and counties within Council of Government regions. Users can receive data on floppy disks by simply specifying the Council of Government regions for which they wish to obtain data. In addition, data on floppy disk for individual counties can be provided on request.

# Pictures from the Colonias

Ever wonder what a colonia looks like? Here are a few pictures of various colonias along the border of Texas and Mexico.







# Panoramic Views of Las Colonias

## What Are Colonias and Who Lives in Them?

Even though colonias have gained much attention in the last several years, most people do not realize the extent of the problem along the Texas-Mexico border. Most people are unaware that colonias have existed for many decades. Colonias are generally understood to be subdivisions in unincorporated areas with inadequate infrastructure and inhabited by residents with very low incomes. They are defined by the absence of one or more of the following facilities: paved streets, numbered street addresses, sidewalks, storm drainage, sewers, electricity, potable water, or telephone services. Some colonias have been annexed by cities. In 1995, the Texas Water Development Board estimated that over 340,000 Texas residents lived in 1,436 colonias. Over 75 percent of all Texas colonia residents live in Hidalgo, Cameron, Webb, Starr, and El Paso counties.

Most colonia residents are U.S. citizens. They tend to be predominantly Hispanic, young and unskilled. Generally, the level of education of colonia residents is low and illiteracy is high. The primary language is Spanish, which often impedes access to programs and the understanding of policies, procedures, and legal documents. An estimated 43 percent of all colonia residents live in poverty. A family of four was considered, in the 1990 Census, to be below the poverty level if its income was \$12,675 or less. That figure would include an estimated 146,200 colonia residents.

## Water and Health Problems in the Colonias

Colonia residents often face serious water and health problems. Results of the 1990 census show an alarming situation regarding water infrastructure. While 85 percent of colonia households own their own home, 23 percent report no treated water within the house. A 1990 General Accounting Office (GAO) study found that out of 842 colonias identified in the six Texas counties studied (Cameron, El Paso, Hidalgo, Starr, Webb, and Willacy), 503 colonias had access to water systems while only three had access to sewer systems. The use of untreated water for drinking, washing, bathing, and cooking ranged from 4 percent to 13 percent of households. The 1990 Census indicates that approximately 50 percent of colonia houses in rural counties and 20 percent of houses in urban counties (i.e., Cameron, El Paso, Hidalgo, Webb) have incomplete plumbing facilities. Furthermore, 40 percent of colonia households in rural and 15 percent in urban counties

lacked complete kitchen facilities. Fifty percent of colonia households had a septic tank and 36 percent used cesspools (septic tank usage was high in the Rio Grande Valley and cesspool use was high in El Paso).

As one might expect given these living conditions, the health profile of colonias residents is quite poor. In 1988, the Texas Department of Health conducted a health needs assessment of colonia residents in the Lower Rio Grande Valley and El Paso County. Sixty-five percent of the colonia residents had no health insurance. On the whole, colonia residents have a higher incidence of disease. The rate of tuberculosis was 3.9 percent and the rate of hepatitis was 6.2 percent. Other health problems included high rates of gastro-enteritis, skin disease, and other water related problems.

Many attribute this to poor access to health care, unsanitary living conditions, and environmental hazards. Many colonia communities report cases in which a majority of the children have health problems ranging from asthma to dysentery as a direct relation to environmental hazards. Salmonellosis, shigellosis, amebiasis, hepatitis A and B, tuberculosis, measles, rubella, whooping cough, tetanus, diphtheria, polio, Hemophilus influenza type B, influenza, and cholera are all threats along the border because of living conditions, disease incidence and lack of immunizations. Many of these diseases have appeared along the border because of poor drainage problems. Flooding is a problem in about half of the colonias. The Rio Grande Valley water table is quite low, rising from 15 to 20 feet above sea level in Brownsville to 100 to 125 feet above sea level in McAllen. In addition, ground water is near the surface, 3 to 4 feet below the surface in much of the area, creating the conditions for frequent flooding and poor drainage. This poor drainage decreases the effectiveness of outhouses and septic tanks. Water used for bathing, washing, and even drinking may be drawn from drainage ditches that collect sewage and agricultural chemicals from adjacent fields. The effects of such high rates of disease are only amplified by the widespread poverty of the area. Usually it is the responsibility of local governments to solve public health or sanitation problems. In rare instances when local entities do not have the resources or are unable to attain a solution, other units of government usually assist. Efforts at the state level, however, have begun only in the last few years.

## **Colonia Housing**

The lack of affordable housing along the border is the primary reason for the proliferation of colonias. Although the price of land within border cities may not be much higher than in rural areas, the purchase of land within a city generally requires the use of traditional financing for which a low-income person may not qualify. Father Ed Roden, long time pastor of La Purisima Catholic Church in Socorro, Texas, testified before the subcommittee of Water Resources of the House Committee on Public Works and Transportation:

The people in colonias came looking for the American Dream: to own a piece of land and build a home and future for their families. In most cases, they have done this because El Paso has only a one percent housing vacancy for low income people. The El Paso Housing Authority has frozen its waiting list for families. And so, people came to the Valley and bought half-acre lots for \$10,000 on a contract for sale. This is affordable for our families that earn \$7,000 to \$10,000 per year. They bought this land trusting what turned out to be greedy, dishonest developers who promised water and other services in the near future. So, the problem is not just one of convenience, it is a matter of disease and an insult to human dignity.



Father Roden's testimony touches on some of the most fundamental reasons colonias exist: population growth along the border, housing affordability and land sale practices, and land development regulation. For this reason, individuals searching for affordable housing alternatives have turned to rural land "developers" who offer financing to them through what is referred to as a "contract-for-sale."

Under a contract-for-sale, the purchaser typically enters into a contract to buy a small residential lot at a low down payment and a low monthly payment. The lots are usually small. Many are as small as 60 feet by 100 feet in size and sell anywhere from \$3,000 to \$12,000. In contrast, lots within the corporate limits of border cities cost much more. Lots within the cities of Laredo and El Paso start at \$10,000 and often exceed \$20,000. The trade-off is that the purchaser does not obtain the deed of ownership of the property until the contract has been paid in full. In addition, finance rates for contracts for sale are often as high as 12 to 14 percent. Under this type of arrangement, a late payment may be subject to exorbitant penalties and may be grounds for foreclosure on the property. Developers have often entered into contracts to sell land with only the promise of basic infrastructure such as paved roads and access to water and sewer. In many colonias, these services were never provided, leading to the poor condition of infrastructure in many colonias today.

Another advantage to buying land in a rural subdivision is that building structures are not subject to municipal building codes. The lack of general knowledge pertaining to building codes has caused many colonia residents to put their life savings into a house not built to code. Because most financial institutions will not loan money on a house not built to code, this mistake usually blocks them from having the opportunity to secure a mortgage on their home. Unfortunately, this prevents many from ever moving up into a better home. Financial institutions have also been reluctant to finance housing in colonia areas because of the uncertainty in actual ownership of property. The traditional method of home finance, payments due on a monthly basis, may not be feasible for colonia residents, many of whom are migrant farm workers with seasonal employment. Colonia residents must often pay for the construction of their home on a cash basis. For this reason, many residents are only able to finance the construction of their home on a piecemeal basis, often not making provisions for electrical connections, indoor plumbing, or heating. In addition, some residents may live in a partially-constructed home until construction has been completed.

In Texas, limitations on county authority over land development is another factor that has contributed to the development of colonias. One of the main reasons that land in rural subdivisions is more affordable is that it is not subject to municipal regulation and does not have access to municipal services. Although counties possess some authority to regulate the development of land in rural areas, this authority, until recently, has been limited to the establishment of minimum road and drainage requirements. The limitations on county authority have allowed for the legal development of rural subdivisions without water and sewer services.

This lack of county authority has other repercussions as well. Frequently, the funding that is available for low income housing must be applied for by some entity, usually a local government. However, there is no city government for colonias in unincorporated areas, and the county is often too weak to do so. Until recently, colonias had no recourse unless some other entity was able to apply for the funds or the colonia was annexed by a city. Cities often are reluctant to annex colonias because in doing so, they must extend basic services to the annexed area. The high rate of poverty among colonia residents usually indicates that the tax base to be gained by a city would not sufficiently offset the costs of annexing the colonia. Thus again colonias are usually left in limbo.

Loopholes in the laws governing land sales also facilitated the development of colonias. Because land sales occur independent of the land development process, it is possible for land to be sold in a subdivision that has not been approved by the county. Even though the subdivision of land is illegal, the sale of land is not (i.e., the person purchasing the land holds a legal claim to the land). Because these illegal subdivisions were not approved by the county, they may not meet minimum subdivision requirements. Such a lot, for example, may be too small to permit the installation of a septic tank.<sup>1[1]</sup>

### **Recent Progress on Colonia Improvements through EDAP**

In May 1989, the Texas Legislature passed Senate Bill 2, a revision of the Texas Water Code, which provided \$100 million in bonds to cover water infrastructure loans and grants to counties with economically distressed political subdivisions. Since then, the Texas Water Development Board (TWDB) has committed more than \$564 million for the Economically Distressed Areas Program (EDAP) water and wastewater infrastructure projects.<sup>2[2]</sup> While there is still much need for improvement, EDAP and other programs have resulted in much better living conditions for 100,000s of colonia residents.

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<sup>1[1]</sup> Text from Colonia Housing and Infrastructure: Volume I - Current Characteristics and Future Needs, pp. 1-4

<sup>1[2]</sup> Text from Colonia Housing and Infrastructure: Volume III - Regulatory Issues and Policy Analyses, Ch.1.

## List of viewable panoramas

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# Las Colonias Newsletters

On a quarterly basis, we have with the help of [Estrada Communications, Inc.](#), our Las Colonias Newsletter will be shown here. Click below to view the newsletters.\*

- [Fall 1998](#) [Issue 1]
- [Spring 1999](#) [Issue 2]
- [Summer 1999](#) [Issue 3]
- [Fall 1999](#) [Issue 4]
- [Winter 2000](#) [Issue 5]
- [Spring 2000](#) [Issue 6]
- [Winter 2000](#) [i.e., 2001, Issue 7]

# Statistical Demographics

## Counties Included in the Study

# Brewster County

| YEAR                | TOTAL  | ANGLO | BLACK | HISPANIC | OTHER |
|---------------------|--------|-------|-------|----------|-------|
| <b>SCENARIO 0.0</b> |        |       |       |          |       |
| 1990                | 8,681  | 4,839 | 77    | 3,700    | 65    |
| 1995                | 9,492  | 5,089 | 114   | 4,216    | 73    |
| 2000                | 9,986  | 5,167 | 131   | 4,611    | 77    |
| 2005                | 10,390 | 5,192 | 151   | 4,968    | 79    |
| 2010                | 10,768 | 5,216 | 170   | 5,303    | 79    |
| 2015                | 11,071 | 5,189 | 187   | 5,617    | 78    |
| 2020                | 11,327 | 5,136 | 204   | 5,911    | 76    |
| 2025                | 11,570 | 5,076 | 224   | 6,194    | 76    |
| 2030                | 11,796 | 5,024 | 242   | 6,458    | 72    |
| <b>SCENARIO .05</b> |        |       |       |          |       |
| 1990                | 8,681  | 4,839 | 77    | 3,700    | 65    |
| 1995                | 9,731  | 5,247 | 114   | 4,297    | 73    |
| 2000                | 10,422 | 5,424 | 132   | 4,789    | 77    |
| 2005                | 11,010 | 5,530 | 152   | 5,251    | 77    |
| 2010                | 11,590 | 5,651 | 171   | 5,692    | 76    |
| 2015                | 12,107 | 5,706 | 187   | 6,137    | 77    |
| 2020                | 12,595 | 5,704 | 204   | 6,613    | 74    |
| 2025                | 13,061 | 5,680 | 219   | 7,089    | 73    |
| 2030                | 13,498 | 5,633 | 238   | 7,558    | 69    |
| <b>SCENARIO .10</b> |        |       |       |          |       |
| 1990                | 8,681  | 4,839 | 77    | 3,700    | 65    |
| 1995                | 10,059 | 5,397 | 114   | 4,475    | 73    |
| 2000                | 11,100 | 5,747 | 129   | 5,148    | 76    |

|                     |        |       |     |       |     |
|---------------------|--------|-------|-----|-------|-----|
| 2005                | 11,985 | 5,971 | 151 | 5,786 | 77  |
| 2010                | 12,899 | 6,212 | 168 | 6,444 | 75  |
| 2015                | 13,730 | 6,384 | 182 | 7,090 | 74  |
| 2020                | 14,442 | 6,460 | 191 | 7,721 | 70  |
| 2025                | 15,065 | 6,437 | 207 | 8,358 | 63  |
| 2030                | 15,587 | 6,325 | 212 | 8,994 | 56  |
|                     |        |       |     |       |     |
| SCENARIO<br>1990-96 |        |       |     |       |     |
|                     |        |       |     |       |     |
| 1990                | 8,681  | 4,839 | 77  | 3,700 | 65  |
| 1995                | 9,724  | 5,297 | 114 | 4,238 | 75  |
| 2000                | 10,458 | 5,500 | 132 | 4,744 | 82  |
| 2005                | 11,061 | 5,570 | 154 | 5,248 | 89  |
| 2010                | 11,682 | 5,676 | 172 | 5,744 | 90  |
| 2015                | 12,199 | 5,700 | 189 | 6,213 | 97  |
| 2020                | 12,670 | 5,669 | 209 | 6,690 | 102 |
| 2025                | 13,112 | 5,619 | 230 | 7,156 | 107 |
| 2030                | 13,466 | 5,522 | 246 | 7,596 | 102 |

# Cameron County

| YEAR                    | TOTAL   | ANGLO  | BLACK | HISPANIC | OTHER |
|-------------------------|---------|--------|-------|----------|-------|
|                         |         |        |       |          |       |
| <b>SCENARIO<br/>0.0</b> |         |        |       |          |       |
|                         |         |        |       |          |       |
| 1990                    | 260,120 | 45,458 | 568   | 212,958  | 1,136 |
| 1995                    | 284,087 | 43,974 | 592   | 238,310  | 1,211 |
| 2000                    | 310,242 | 42,196 | 613   | 266,156  | 1,277 |
| 2005                    | 335,592 | 40,499 | 638   | 293,117  | 1,338 |
| 2010                    | 358,996 | 39,052 | 656   | 317,902  | 1,386 |
| 2015                    | 382,822 | 37,867 | 676   | 342,859  | 1,420 |
| 2020                    | 408,828 | 36,827 | 693   | 369,865  | 1,443 |
| 2025                    | 435,772 | 35,768 | 703   | 397,839  | 1,462 |
| 2030                    | 461,732 | 34,662 | 704   | 424,904  | 1,462 |
|                         |         |        |       |          |       |
| <b>SCENARIO<br/>0.5</b> |         |        |       |          |       |
|                         |         |        |       |          |       |
| 1990                    | 260,120 | 45,458 | 568   | 212,958  | 1,136 |
| 1995                    | 290,269 | 44,057 | 591   | 244,359  | 1,262 |
| 2000                    | 323,563 | 42,014 | 605   | 279,520  | 1,424 |
| 2005                    | 357,300 | 39,653 | 631   | 315,427  | 1,589 |
| 2010                    | 390,735 | 37,321 | 650   | 351,020  | 1,744 |
| 2015                    | 425,234 | 35,256 | 655   | 387,416  | 1,907 |
| 2020                    | 463,226 | 33,375 | 660   | 427,078  | 2,113 |
| 2025                    | 503,227 | 31,476 | 662   | 468,754  | 2,335 |
| 2030                    | 543,299 | 29,435 | 645   | 510,663  | 2,556 |
|                         |         |        |       |          |       |
|                         |         |        |       |          |       |
| <b>SCENARIO<br/>1.0</b> |         |        |       |          |       |
|                         |         |        |       |          |       |
| 1990                    | 260,120 | 45,458 | 568   | 212,958  | 1,136 |
| 1995                    | 296,227 | 44,001 | 594   | 250,123  | 1,509 |
| 2000                    | 336,339 | 41,626 | 619   | 292,110  | 1,984 |
| 2005                    | 378,286 | 38,540 | 654   | 336,520  | 2,572 |
| 2010                    | 421,027 | 35,300 | 674   | 381,756  | 3,297 |
| 2015                    | 465,972 | 32,349 | 666   | 428,772  | 4,185 |
| 2020                    | 514,734 | 29,628 | 661   | 479,210  | 5,235 |
| 2025                    | 566,028 | 26,870 | 642   | 532,044  | 6,472 |
| 2030                    | 617,525 | 23,930 | 626   | 585,138  | 7,831 |
|                         |         |        |       |          |       |

| SCENARIO<br>1990-96 |         |        |     |         |       |
|---------------------|---------|--------|-----|---------|-------|
|                     |         |        |     |         |       |
| 1990                | 260,120 | 45,458 | 568 | 212,958 | 1,136 |
| 1995                | 299,015 | 49,018 | 601 | 248,006 | 1,390 |
| 2000                | 349,596 | 53,101 | 641 | 294,063 | 1,791 |
| 2005                | 407,161 | 58,353 | 690 | 345,790 | 2,328 |
| 2010                | 468,608 | 64,864 | 730 | 399,982 | 3,032 |
| 2015                | 536,075 | 72,240 | 755 | 459,101 | 3,979 |
| 2020                | 612,210 | 80,166 | 774 | 526,025 | 5,245 |
| 2025                | 696,266 | 88,508 | 785 | 600,087 | 6,886 |
| 2030                | 784,694 | 97,206 | 786 | 677,810 | 8,892 |



# El Paso County

| YEAR                    | TOTAL     | ANGLO   | BLACK  | HISPANIC  | OTHER  |
|-------------------------|-----------|---------|--------|-----------|--------|
|                         |           |         |        |           |        |
| <b>SCENARIO<br/>0.0</b> |           |         |        |           |        |
|                         |           |         |        |           |        |
| 1990                    | 591,610   | 151,660 | 20,578 | 411,672   | 7,700  |
| 1995                    | 645,101   | 154,130 | 21,686 | 460,916   | 8,369  |
| 2000                    | 696,323   | 154,792 | 22,815 | 509,843   | 8,873  |
| 2005                    | 742,921   | 154,433 | 23,944 | 555,262   | 9,282  |
| 2010                    | 785,620   | 153,633 | 25,131 | 597,279   | 9,577  |
| 2015                    | 829,644   | 152,723 | 26,264 | 640,920   | 9,737  |
| 2020                    | 876,162   | 151,449 | 27,212 | 687,681   | 9,820  |
| 2025                    | 921,479   | 149,280 | 27,976 | 734,271   | 9,952  |
| 2030                    | 962,088   | 146,105 | 28,535 | 777,517   | 9,931  |
|                         |           |         |        |           |        |
| <b>SCENARIO<br/>0.5</b> |           |         |        |           |        |
|                         |           |         |        |           |        |
| 1990                    | 591,610   | 151,660 | 20,578 | 411,672   | 7,700  |
| 1995                    | 661,837   | 149,917 | 22,090 | 480,592   | 9,238  |
| 2000                    | 735,547   | 146,420 | 23,641 | 554,649   | 10,837 |
| 2005                    | 810,100   | 141,863 | 25,181 | 630,636   | 12,420 |
| 2010                    | 885,301   | 136,610 | 26,788 | 707,978   | 13,925 |
| 2015                    | 965,966   | 131,064 | 28,368 | 791,099   | 15,435 |
| 2020                    | 1,054,315 | 125,090 | 29,741 | 882,522   | 16,962 |
| 2025                    | 1,147,266 | 118,531 | 30,872 | 979,354   | 18,509 |
| 2030                    | 1,240,183 | 111,424 | 31,811 | 1,077,024 | 19,924 |
|                         |           |         |        |           |        |
| <b>SCENARIO<br/>1.0</b> |           |         |        |           |        |
|                         |           |         |        |           |        |
| 1990                    | 591,610   | 151,660 | 20,578 | 411,672   | 7,700  |
| 1995                    | 678,243   | 145,321 | 22,444 | 500,410   | 10,068 |
| 2000                    | 775,004   | 137,011 | 24,347 | 600,826   | 12,820 |
| 2005                    | 880,280   | 127,617 | 26,191 | 710,515   | 15,957 |
| 2010                    | 992,897   | 117,519 | 28,042 | 827,964   | 19,372 |
| 2015                    | 1,117,131 | 107,236 | 29,739 | 957,018   | 23,138 |
| 2020                    | 1,256,771 | 96,863  | 30,994 | 1,101,526 | 27,388 |
| 2025                    | 1,409,250 | 86,526  | 31,856 | 1,258,815 | 32,053 |
| 2030                    | 1,569,215 | 76,302  | 32,312 | 1,423,714 | 36,887 |
|                         |           |         |        |           |        |
| <b>SCENARIO</b>         |           |         |        |           |        |

|         |           |         |        |         |        |
|---------|-----------|---------|--------|---------|--------|
| 1990-96 |           |         |        |         |        |
|         |           |         |        |         |        |
| 1990    | 591,610   | 151,660 | 20,578 | 411,672 | 7,700  |
| 1995    | 654,805   | 156,313 | 21,996 | 467,106 | 9,390  |
| 2000    | 725,864   | 156,924 | 23,514 | 533,907 | 11,519 |
| 2005    | 797,557   | 155,336 | 25,022 | 603,209 | 13,990 |
| 2010    | 867,578   | 152,485 | 26,526 | 671,861 | 16,706 |
| 2015    | 941,816   | 148,694 | 27,937 | 745,466 | 19,719 |
| 2020    | 1,021,886 | 143,827 | 29,056 | 825,842 | 23,161 |
| 2025    | 1,102,556 | 137,477 | 29,836 | 908,207 | 27,036 |
| 2030    | 1,178,165 | 129,661 | 30,282 | 987,023 | 31,199 |

# Hidalgo County

| YEAR                    | TOTAL     | ANGLO  | BLACK | HISPANIC  | OTHER  |
|-------------------------|-----------|--------|-------|-----------|--------|
|                         |           |        |       |           |        |
| <b>SCENARIO<br/>0.0</b> |           |        |       |           |        |
|                         |           |        |       |           |        |
| 1990                    | 383,545   | 54,395 | 519   | 326,934   | 1,697  |
| 1995                    | 423,668   | 51,661 | 873   | 369,323   | 1,811  |
| 2000                    | 465,995   | 48,529 | 887   | 414,676   | 1,903  |
| 2005                    | 508,018   | 45,827 | 918   | 459,290   | 1,983  |
| 2010                    | 548,049   | 43,793 | 956   | 501,236   | 2,064  |
| 2015                    | 589,447   | 42,264 | 988   | 544,047   | 2,148  |
| 2020                    | 634,677   | 40,955 | 1,017 | 590,494   | 2,211  |
| 2025                    | 681,939   | 39,671 | 1,038 | 638,989   | 2,241  |
| 2030                    | 727,454   | 38,326 | 1,056 | 685,821   | 2,251  |
|                         |           |        |       |           |        |
| <b>SCENARIO<br/>0.5</b> |           |        |       |           |        |
|                         |           |        |       |           |        |
| 1990                    | 383,545   | 54,395 | 519   | 326,934   | 1,697  |
| 1995                    | 440,853   | 52,324 | 867   | 385,694   | 1,968  |
| 2000                    | 504,937   | 49,181 | 874   | 452,602   | 2,280  |
| 2005                    | 573,867   | 45,778 | 897   | 524,517   | 2,675  |
| 2010                    | 645,664   | 42,693 | 929   | 598,874   | 3,168  |
| 2015                    | 723,783   | 40,169 | 949   | 678,911   | 3,754  |
| 2020                    | 811,617   | 37,993 | 968   | 768,264   | 4,392  |
| 2025                    | 906,730   | 35,879 | 963   | 864,832   | 5,056  |
| 2030                    | 1,005,941 | 33,614 | 952   | 965,671   | 5,704  |
|                         |           |        |       |           |        |
| <b>SCENARIO<br/>1.0</b> |           |        |       |           |        |
|                         |           |        |       |           |        |
| 1990                    | 383,545   | 54,395 | 519   | 326,934   | 1,697  |
| 1995                    | 458,857   | 52,912 | 868   | 402,771   | 2,306  |
| 2000                    | 546,651   | 49,931 | 874   | 492,786   | 3,060  |
| 2005                    | 645,308   | 45,872 | 905   | 594,496   | 4,035  |
| 2010                    | 754,662   | 41,645 | 941   | 706,783   | 5,293  |
| 2015                    | 877,467   | 38,020 | 952   | 831,643   | 6,852  |
| 2020                    | 1,018,464 | 34,860 | 964   | 973,936   | 8,704  |
| 2025                    | 1,175,517 | 31,757 | 974   | 1,131,885 | 10,901 |
| 2030                    | 1,344,818 | 28,378 | 977   | 1,302,017 | 13,446 |
|                         |           |        |       |           |        |
| <b>SCENARIO</b>         |           |        |       |           |        |

|         |           |        |       |           |        |
|---------|-----------|--------|-------|-----------|--------|
| 1990-96 |           |        |       |           |        |
|         |           |        |       |           |        |
| 1990    | 383,545   | 54,395 | 519   | 326,934   | 1,697  |
| 1995    | 464,981   | 55,265 | 880   | 406,750   | 2,086  |
| 2000    | 574,383   | 55,766 | 903   | 515,083   | 2,631  |
| 2005    | 710,544   | 56,959 | 946   | 649,259   | 3,380  |
| 2010    | 872,171   | 59,026 | 981   | 807,770   | 4,394  |
| 2015    | 1,065,146 | 61,620 | 1,022 | 996,822   | 5,682  |
| 2020    | 1,299,724 | 64,122 | 1,054 | 1,227,276 | 7,272  |
| 2025    | 1,580,502 | 66,345 | 1,066 | 1,503,931 | 9,160  |
| 2030    | 1,908,040 | 68,259 | 1,072 | 1,827,417 | 11,292 |

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# Hudspeth County

| YEAR                | TOTAL | ANGLO | BLACK | HISPANIC | OTHER |
|---------------------|-------|-------|-------|----------|-------|
| <b>SCENARIO 0.0</b> |       |       |       |          |       |
| 1990                | 2,915 | 956   | 9     | 1,935    | 15    |
| 1995                | 3,139 | 967   | 9     | 2,148    | 15    |
| 2000                | 3,374 | 980   | 9     | 2,370    | 15    |
| 2005                | 3,625 | 1,001 | 9     | 2,601    | 14    |
| 2010                | 3,845 | 1,017 | 9     | 2,804    | 15    |
| 2015                | 4,061 | 1,020 | 9     | 3,017    | 15    |
| 2020                | 4,263 | 1,014 | 9     | 3,225    | 15    |
| 2025                | 4,450 | 992   | 9     | 3,434    | 15    |
| 2030                | 4,622 | 966   | 9     | 3,632    | 15    |
| <b>SCENARIO 0.5</b> |       |       |       |          |       |
| 1990                | 2,915 | 956   | 9     | 1,935    | 15    |
| 1995                | 3,147 | 964   | 9     | 2,159    | 15    |
| 2000                | 3,379 | 967   | 9     | 2,389    | 14    |
| 2005                | 3,607 | 966   | 9     | 2,618    | 14    |
| 2010                | 3,809 | 953   | 9     | 2,833    | 14    |
| 2015                | 3,949 | 913   | 9     | 3,013    | 14    |
| 2020                | 4,105 | 877   | 9     | 3,206    | 13    |
| 2025                | 4,274 | 853   | 9     | 3,399    | 13    |
| 2030                | 4,418 | 826   | 9     | 3,570    | 13    |
| <b>SCENARIO 1.0</b> |       |       |       |          |       |
| 1990                | 2,915 | 956   | 9     | 1,935    | 15    |
| 1995                | 3,167 | 952   | 9     | 2,191    | 15    |
| 2000                | 3,393 | 931   | 9     | 2,439    | 14    |
| 2005                | 3,657 | 909   | 9     | 2,725    | 14    |
| 2010                | 3,854 | 878   | 8     | 2,954    | 14    |
| 2015                | 4,054 | 847   | 8     | 3,187    | 12    |

|                     |       |     |   |       |    |
|---------------------|-------|-----|---|-------|----|
| 2020                | 4,240 | 780 | 8 | 3,439 | 13 |
| 2025                | 4,438 | 728 | 8 | 3,689 | 13 |
| 2030                | 4,573 | 668 | 7 | 3,886 | 12 |
|                     |       |     |   |       |    |
| SCENARIO<br>1990-96 |       |     |   |       |    |
|                     |       |     |   |       |    |
| 1990                | 2,915 | 956 | 9 | 1,935 | 15 |
| 1995                | 3,153 | 973 | 9 | 2,156 | 15 |
| 2000                | 3,440 | 988 | 9 | 2,427 | 16 |
| 2005                | 3,761 | 997 | 9 | 2,738 | 17 |
| 2010                | 4,045 | 988 | 9 | 3,029 | 19 |
| 2015                | 4,293 | 937 | 9 | 3,328 | 19 |
| 2020                | 4,569 | 901 | 9 | 3,639 | 20 |
| 2025                | 4,867 | 866 | 9 | 3,972 | 20 |
| 2030                | 5,126 | 814 | 9 | 4,283 | 20 |

# La Salle County

| YEAR                | TOTAL | ANGLO | BLACK | HISPANIC | OTHER |
|---------------------|-------|-------|-------|----------|-------|
|                     |       |       |       |          |       |
| <b>SCENARIO 0.0</b> |       |       |       |          |       |
|                     |       |       |       |          |       |
| 1990                | 5,254 | 1,104 | 52    | 4,068    | 30    |
| 1995                | 6,183 | 1,230 | 303   | 4,612    | 38    |
| 2000                | 6,509 | 1,222 | 275   | 4,975    | 37    |
| 2005                | 6,930 | 1,230 | 273   | 5,390    | 37    |
| 2010                | 7,336 | 1,237 | 269   | 5,794    | 36    |
| 2015                | 7,726 | 1,240 | 268   | 6,181    | 37    |
| 2020                | 8,081 | 1,225 | 266   | 6,553    | 37    |
| 2025                | 8,416 | 1,191 | 264   | 6,924    | 37    |
| 2030                | 8,732 | 1,156 | 258   | 7,282    | 36    |
|                     |       |       |       |          |       |
| <b>SCENARIO 0.5</b> |       |       |       |          |       |
|                     |       |       |       |          |       |
| 1990                | 5,254 | 1,104 | 52    | 4,068    | 30    |
| 1995                | 6,177 | 1,222 | 295   | 4,622    | 38    |
| 2000                | 6,496 | 1,198 | 269   | 4,992    | 37    |
| 2005                | 6,883 | 1,169 | 264   | 5,414    | 36    |
| 2010                | 7,250 | 1,147 | 262   | 5,805    | 36    |
| 2015                | 7,585 | 1,104 | 256   | 6,190    | 35    |
| 2020                | 7,913 | 1,066 | 252   | 6,560    | 35    |
| 2025                | 8,223 | 1,018 | 248   | 6,922    | 35    |
| 2030                | 8,518 | 970   | 245   | 7,269    | 34    |
|                     |       |       |       |          |       |
| <b>SCENARIO 1.0</b> |       |       |       |          |       |
|                     |       |       |       |          |       |
| 1990                | 5,254 | 1,104 | 52    | 4,068    | 30    |
| 1995                | 6,178 | 1,199 | 292   | 4,650    | 37    |
| 2000                | 6,471 | 1,143 | 259   | 5,033    | 36    |
| 2005                | 6,779 | 1,097 | 252   | 5,393    | 37    |
| 2010                | 7,049 | 1,040 | 245   | 5,729    | 35    |
| 2015                | 7,304 | 994   | 240   | 6,035    | 35    |

|                     |        |       |     |       |    |
|---------------------|--------|-------|-----|-------|----|
| 2020                | 7,499  | 919   | 232 | 6,314 | 34 |
| 2025                | 7,633  | 835   | 223 | 6,543 | 32 |
| 2030                | 7,705  | 753   | 209 | 6,711 | 32 |
|                     |        |       |     |       |    |
| SCENARIO<br>1990-96 |        |       |     |       |    |
|                     |        |       |     |       |    |
| 1990                | 5,254  | 1,104 | 52  | 4,068 | 30 |
| 1995                | 6,253  | 1,265 | 306 | 4,643 | 39 |
| 2000                | 6,753  | 1,305 | 280 | 5,128 | 40 |
| 2005                | 7,371  | 1,338 | 281 | 5,708 | 44 |
| 2010                | 7,993  | 1,358 | 282 | 6,306 | 47 |
| 2015                | 8,603  | 1,359 | 281 | 6,912 | 51 |
| 2020                | 9,205  | 1,348 | 276 | 7,527 | 54 |
| 2025                | 9,807  | 1,329 | 273 | 8,150 | 55 |
| 2030                | 10,381 | 1,305 | 262 | 8,757 | 57 |



# Pecos County

| YEAR                | TOTAL  | ANGLO | BLACK | HISPANIC | OTHER |
|---------------------|--------|-------|-------|----------|-------|
| <b>SCENARIO 0.0</b> |        |       |       |          |       |
| 1990                | 14,675 | 6,217 | 51    | 8,327    | 80    |
| 1995                | 17,457 | 6,742 | 863   | 9,758    | 94    |
| 2000                | 18,446 | 6,881 | 850   | 10,619   | 96    |
| 2005                | 19,413 | 7,001 | 844   | 11,466   | 102   |
| 2010                | 20,297 | 7,088 | 829   | 12,274   | 106   |
| 2015                | 21,079 | 7,103 | 820   | 13,047   | 109   |
| 2020                | 21,823 | 7,102 | 811   | 13,803   | 107   |
| 2025                | 22,512 | 7,106 | 799   | 14,506   | 101   |
| 2030                | 23,131 | 7,110 | 790   | 15,139   | 92    |
| <b>SCENARIO 0.5</b> |        |       |       |          |       |
| 1990                | 14,675 | 6,217 | 51    | 8,327    | 80    |
| 1995                | 17,405 | 6,620 | 849   | 9,843    | 93    |
| 2000                | 18,321 | 6,599 | 823   | 10,801   | 98    |
| 2005                | 19,185 | 6,561 | 808   | 11,713   | 103   |
| 2010                | 19,989 | 6,483 | 792   | 12,609   | 105   |
| 2015                | 20,686 | 6,343 | 779   | 13,455   | 109   |
| 2020                | 21,342 | 6,185 | 763   | 14,287   | 107   |
| 2025                | 21,940 | 6,030 | 753   | 15,061   | 96    |
| 2030                | 22,472 | 5,881 | 733   | 15,770   | 88    |
| <b>SCENARIO 1.0</b> |        |       |       |          |       |
| 1990                | 14,675 | 6,217 | 51    | 8,327    | 80    |
| 1995                | 17,152 | 6,378 | 833   | 9,847    | 94    |
| 2000                | 17,734 | 6,071 | 797   | 10,769   | 97    |
| 2005                | 18,256 | 5,741 | 775   | 11,641   | 99    |
| 2010                | 18,604 | 5,356 | 750   | 12,393   | 105   |
| 2015                | 18,792 | 4,939 | 723   | 13,028   | 102   |

|                     |        |       |     |        |     |
|---------------------|--------|-------|-----|--------|-----|
| 2020                | 18,922 | 4,531 | 696 | 13,601 | 94  |
| 2025                | 18,941 | 4,132 | 663 | 14,061 | 85  |
| 2030                | 18,825 | 3,736 | 642 | 14,370 | 77  |
|                     |        |       |     |        |     |
| SCENARIO<br>1990-96 |        |       |     |        |     |
|                     |        |       |     |        |     |
| 1990                | 14,675 | 6,217 | 51  | 8,327  | 80  |
| 1995                | 17,516 | 6,747 | 872 | 9,800  | 97  |
| 2000                | 18,631 | 6,749 | 876 | 10,902 | 104 |
| 2005                | 19,775 | 6,680 | 874 | 12,109 | 112 |
| 2010                | 20,810 | 6,512 | 868 | 13,307 | 123 |
| 2015                | 21,734 | 6,263 | 854 | 14,479 | 138 |
| 2020                | 22,619 | 5,990 | 838 | 15,644 | 147 |
| 2025                | 23,429 | 5,686 | 819 | 16,775 | 149 |
| 2030                | 24,099 | 5,363 | 794 | 17,800 | 142 |

# Presidio County

| YEAR                | TOTAL  | ANGLO | BLACK | HISPANIC | OTHER |
|---------------------|--------|-------|-------|----------|-------|
|                     |        |       |       |          |       |
| <b>SCENARIO 0.0</b> |        |       |       |          |       |
|                     |        |       |       |          |       |
| 1990                | 6,637  | 1,201 | 2     | 5,415    | 19    |
| 1995                | 7,040  | 1,190 | 2     | 5,829    | 19    |
| 2000                | 7,491  | 1,179 | 2     | 6,291    | 19    |
| 2005                | 7,920  | 1,158 | 2     | 6,741    | 19    |
| 2010                | 8,305  | 1,148 | 2     | 7,136    | 19    |
| 2015                | 8,668  | 1,128 | 2     | 7,519    | 19    |
| 2020                | 9,055  | 1,112 | 2     | 7,922    | 19    |
| 2025                | 9,397  | 1,069 | 2     | 8,307    | 19    |
| 2030                | 9,691  | 1,017 | 2     | 8,653    | 19    |
|                     |        |       |       |          |       |
| <b>SCENARIO 0.5</b> |        |       |       |          |       |
|                     |        |       |       |          |       |
| 1990                | 6,637  | 1,201 | 2     | 5,415    | 19    |
| 1995                | 7,317  | 1,195 | 2     | 6,101    | 19    |
| 2000                | 8,078  | 1,164 | 2     | 6,893    | 19    |
| 2005                | 8,871  | 1,117 | 2     | 7,734    | 18    |
| 2010                | 9,684  | 1,076 | 2     | 8,589    | 17    |
| 2015                | 10,531 | 1,017 | 2     | 9,495    | 17    |
| 2020                | 11,471 | 968   | 2     | 10,484   | 17    |
| 2025                | 12,438 | 918   | 2     | 11,501   | 17    |
| 2030                | 13,420 | 868   | 2     | 12,534   | 16    |
|                     |        |       |       |          |       |
| <b>SCENARIO 1.0</b> |        |       |       |          |       |
|                     |        |       |       |          |       |
| 1990                | 6,637  | 1,201 | 2     | 5,415    | 19    |
| 1995                | 7,648  | 1,212 | 2     | 6,415    | 19    |
| 2000                | 8,718  | 1,200 | 2     | 7,498    | 18    |
| 2005                | 9,948  | 1,174 | 2     | 8,755    | 17    |
| 2010                | 11,230 | 1,111 | 2     | 10,099   | 18    |
| 2015                | 12,694 | 1,069 | 2     | 11,606   | 17    |

|                     |        |       |   |        |    |
|---------------------|--------|-------|---|--------|----|
| 2020                | 14,292 | 1,012 | 2 | 13,262 | 16 |
| 2025                | 15,945 | 937   | 2 | 14,993 | 13 |
| 2030                | 17,708 | 849   | 2 | 16,843 | 14 |
|                     |        |       |   |        |    |
| SCENARIO<br>1990-96 |        |       |   |        |    |
|                     |        |       |   |        |    |
| 1990                | 6,637  | 1,201 | 2 | 5,415  | 19 |
| 1995                | 7,109  | 1,193 | 2 | 5,895  | 19 |
| 2000                | 7,755  | 1,178 | 2 | 6,555  | 20 |
| 2005                | 8,449  | 1,153 | 2 | 7,273  | 21 |
| 2010                | 9,114  | 1,100 | 2 | 7,990  | 22 |
| 2015                | 9,755  | 1,027 | 2 | 8,704  | 22 |
| 2020                | 10,463 | 979   | 2 | 9,460  | 22 |
| 2025                | 11,163 | 913   | 2 | 10,226 | 22 |
| 2030                | 11,811 | 848   | 2 | 10,939 | 22 |

# Terrell County

| YEAR                | TOTAL | ANGLO | BLACK | HISPANIC | OTHER |
|---------------------|-------|-------|-------|----------|-------|
|                     |       |       |       |          |       |
| <b>SCENARIO 0.0</b> |       |       |       |          |       |
|                     |       |       |       |          |       |
| 1990                | 1,410 | 651   | 1     | 751      | 7     |
| 1995                | 1,457 | 646   | 1     | 803      | 7     |
| 2000                | 1,528 | 642   | 1     | 878      | 7     |
| 2005                | 1,603 | 645   | 1     | 950      | 7     |
| 2010                | 1,670 | 649   | 1     | 1,013    | 7     |
| 2015                | 1,710 | 641   | 1     | 1,061    | 7     |
| 2020                | 1,729 | 619   | 1     | 1,102    | 7     |
| 2025                | 1,749 | 599   | 1     | 1,142    | 7     |
| 2030                | 1,762 | 570   | 1     | 1,184    | 7     |
|                     |       |       |       |          |       |
| <b>SCENARIO 0.5</b> |       |       |       |          |       |
|                     |       |       |       |          |       |
| 1990                | 1,410 | 651   | 1     | 751      | 7     |
| 1995                | 1,457 | 644   | 1     | 805      | 7     |
| 2000                | 1,524 | 638   | 1     | 878      | 7     |
| 2005                | 1,586 | 629   | 1     | 949      | 7     |
| 2010                | 1,635 | 619   | 1     | 1,008    | 7     |
| 2015                | 1,621 | 590   | 1     | 1,023    | 7     |
| 2020                | 1,625 | 557   | 1     | 1,062    | 5     |
| 2025                | 1,625 | 512   | 1     | 1,107    | 5     |
| 2030                | 1,628 | 480   | 1     | 1,142    | 5     |
|                     |       |       |       |          |       |
| <b>SCENARIO 1.0</b> |       |       |       |          |       |
|                     |       |       |       |          |       |
| 1990                | 1,410 | 651   | 1     | 751      | 7     |
| 1995                | 1,467 | 643   | 1     | 816      | 7     |
| 2000                | 1,530 | 612   | 1     | 910      | 7     |
| 2005                | 1,592 | 589   | 1     | 997      | 5     |
| 2010                | 1,610 | 559   | 1     | 1,045    | 5     |
| 2015                | 1,612 | 513   | 1     | 1,093    | 5     |

|                     |       |     |   |       |   |
|---------------------|-------|-----|---|-------|---|
| 2020                | 1,622 | 474 | 1 | 1,142 | 5 |
| 2025                | 1,612 | 422 | 1 | 1,184 | 5 |
| 2030                | 1,624 | 384 | 1 | 1,234 | 5 |
|                     |       |     |   |       |   |
| SCENARIO<br>1990-96 |       |     |   |       |   |
|                     |       |     |   |       |   |
| 1990                | 1,410 | 651 | 1 | 751   | 7 |
| 1995                | 1,465 | 651 | 1 | 806   | 7 |
| 2000                | 1,539 | 650 | 1 | 881   | 7 |
| 2005                | 1,625 | 648 | 1 | 969   | 7 |
| 2010                | 1,719 | 646 | 1 | 1,065 | 7 |
| 2015                | 1,771 | 613 | 1 | 1,148 | 9 |
| 2020                | 1,778 | 556 | 1 | 1,212 | 9 |
| 2025                | 1,815 | 520 | 1 | 1,286 | 8 |
| 2030                | 1,820 | 455 | 1 | 1,356 | 8 |

# Val Verde County

| YEAR                | TOTAL  | ANGLO  | BLACK | HISPANIC | OTHER |
|---------------------|--------|--------|-------|----------|-------|
|                     |        |        |       |          |       |
| <b>SCENARIO 0.0</b> |        |        |       |          |       |
|                     |        |        |       |          |       |
| 1990                | 38,721 | 10,439 | 682   | 27,294   | 306   |
| 1995                | 42,008 | 10,662 | 753   | 30,257   | 336   |
| 2000                | 45,349 | 10,800 | 806   | 33,378   | 365   |
| 2005                | 48,517 | 10,893 | 858   | 36,377   | 389   |
| 2010                | 51,494 | 10,994 | 910   | 39,185   | 405   |
| 2015                | 54,627 | 11,177 | 965   | 42,076   | 409   |
| 2020                | 57,998 | 11,356 | 1,013 | 45,215   | 414   |
| 2025                | 61,470 | 11,528 | 1,048 | 48,474   | 420   |
| 2030                | 64,736 | 11,644 | 1,073 | 51,596   | 423   |
|                     |        |        |       |          |       |
| <b>SCENARIO 0.5</b> |        |        |       |          |       |
|                     |        |        |       |          |       |
| 1990                | 38,721 | 10,439 | 682   | 27,294   | 306   |
| 1995                | 42,039 | 10,449 | 748   | 30,506   | 336   |
| 2000                | 45,370 | 10,332 | 803   | 33,872   | 363   |
| 2005                | 48,464 | 10,151 | 848   | 37,080   | 385   |
| 2010                | 51,335 | 9,955  | 897   | 40,091   | 392   |
| 2015                | 54,349 | 9,814  | 936   | 43,210   | 389   |
| 2020                | 57,415 | 9,651  | 965   | 46,414   | 385   |
| 2025                | 60,432 | 9,461  | 997   | 49,594   | 380   |
| 2030                | 63,219 | 9,240  | 1,023 | 52,591   | 365   |
|                     |        |        |       |          |       |
| <b>SCENARIO 1.0</b> |        |        |       |          |       |
|                     |        |        |       |          |       |
| 1990                | 38,721 | 10,439 | 682   | 27,294   | 306   |
| 1995                | 41,785 | 10,068 | 773   | 30,595   | 349   |
| 2000                | 44,730 | 9,570  | 846   | 33,906   | 408   |
| 2005                | 47,313 | 8,964  | 921   | 36,978   | 450   |
| 2010                | 49,633 | 8,379  | 990   | 39,785   | 479   |
| 2015                | 51,898 | 7,814  | 1,054 | 42,538   | 492   |

|                     |        |        |       |        |     |
|---------------------|--------|--------|-------|--------|-----|
| 2020                | 54,113 | 7,247  | 1,152 | 45,203 | 511 |
| 2025                | 55,981 | 6,649  | 1,199 | 47,617 | 516 |
| 2030                | 57,455 | 6,040  | 1,210 | 49,683 | 522 |
|                     |        |        |       |        |     |
| SCENARIO<br>1990-96 |        |        |       |        |     |
|                     |        |        |       |        |     |
| 1990                | 38,721 | 10,439 | 682   | 27,294 | 306 |
| 1995                | 42,653 | 10,930 | 755   | 30,616 | 352 |
| 2000                | 47,257 | 11,167 | 813   | 34,877 | 400 |
| 2005                | 52,008 | 11,294 | 866   | 39,390 | 458 |
| 2010                | 56,642 | 11,370 | 926   | 43,839 | 507 |
| 2015                | 61,540 | 11,485 | 987   | 48,535 | 533 |
| 2020                | 66,904 | 11,579 | 1,044 | 53,711 | 570 |
| 2025                | 72,449 | 11,600 | 1,082 | 59,167 | 600 |
| 2030                | 77,663 | 11,459 | 1,096 | 64,475 | 633 |



# Webb County

| YEAR                | TOTAL   | ANGLO | BLACK | HISPANIC | OTHER |
|---------------------|---------|-------|-------|----------|-------|
| <b>SCENARIO 0.0</b> |         |       |       |          |       |
| 1990                | 133,239 | 7,456 | 68    | 125,075  | 640   |
| 1995                | 149,420 | 7,583 | 68    | 141,077  | 692   |
| 2000                | 165,887 | 7,629 | 68    | 157,456  | 734   |
| 2005                | 181,464 | 7,618 | 70    | 172,992  | 784   |
| 2010                | 196,283 | 7,600 | 72    | 187,799  | 812   |
| 2015                | 212,112 | 7,539 | 73    | 203,663  | 837   |
| 2020                | 229,591 | 7,419 | 70    | 221,250  | 852   |
| 2025                | 247,716 | 7,228 | 65    | 239,566  | 857   |
| 2030                | 265,085 | 6,973 | 59    | 257,183  | 870   |
| <b>SCENARIO 0.5</b> |         |       |       |          |       |
| 1990                | 133,239 | 7,456 | 68    | 125,075  | 640   |
| 1995                | 154,322 | 7,449 | 68    | 146,107  | 698   |
| 2000                | 177,024 | 7,390 | 66    | 168,822  | 746   |
| 2005                | 200,624 | 7,309 | 69    | 192,461  | 785   |
| 2010                | 224,878 | 7,200 | 71    | 216,802  | 805   |
| 2015                | 251,608 | 7,026 | 72    | 243,697  | 813   |
| 2020                | 281,386 | 6,786 | 67    | 273,715  | 818   |
| 2025                | 313,371 | 6,482 | 62    | 305,998  | 829   |
| 2030                | 346,209 | 6,118 | 56    | 339,206  | 829   |
| <b>SCENARIO 1.0</b> |         |       |       |          |       |
| 1990                | 133,239 | 7,456 | 68    | 125,075  | 640   |
| 1995                | 159,092 | 7,170 | 68    | 151,090  | 764   |
| 2000                | 188,224 | 6,845 | 67    | 180,371  | 941   |
| 2005                | 219,965 | 6,484 | 71    | 212,228  | 1,182 |
| 2010                | 254,485 | 6,099 | 71    | 246,773  | 1,542 |
| 2015                | 293,124 | 5,652 | 70    | 285,409  | 1,993 |

|                     |         |       |    |         |       |
|---------------------|---------|-------|----|---------|-------|
| 2020                | 336,816 | 5,139 | 67 | 329,057 | 2,553 |
| 2025                | 384,432 | 4,605 | 60 | 376,559 | 3,208 |
| 2030                | 434,654 | 4,081 | 52 | 426,558 | 3,963 |
|                     |         |       |    |         |       |
| SCENARIO<br>1990-96 |         |       |    |         |       |
|                     |         |       |    |         |       |
| 1990                | 133,239 | 7,456 | 68 | 125,075 | 640   |
| 1995                | 162,942 | 7,711 | 68 | 154,419 | 744   |
| 2000                | 202,155 | 7,761 | 68 | 193,451 | 875   |
| 2005                | 249,265 | 7,717 | 71 | 240,445 | 1,032 |
| 2010                | 303,925 | 7,627 | 73 | 295,021 | 1,204 |
| 2015                | 369,469 | 7,462 | 72 | 360,553 | 1,382 |
| 2020                | 449,428 | 7,195 | 69 | 440,608 | 1,556 |
| 2025                | 545,099 | 6,822 | 65 | 536,462 | 1,750 |
| 2030                | 654,827 | 6,371 | 59 | 646,454 | 1,943 |

# Zapata County

| YEAR                | TOTAL  | ANGLO | BLACK | HISPANIC | OTHER |
|---------------------|--------|-------|-------|----------|-------|
| <b>SCENARIO 0.0</b> |        |       |       |          |       |
| 1990                | 9,279  | 1,730 | 1     | 7,517    | 31    |
| 1995                | 9,930  | 1,594 | 1     | 8,304    | 31    |
| 2000                | 10,649 | 1,471 | 1     | 9,146    | 31    |
| 2005                | 11,418 | 1,387 | 1     | 9,999    | 31    |
| 2010                | 12,192 | 1,311 | 1     | 10,849   | 31    |
| 2015                | 12,955 | 1,252 | 1     | 11,671   | 31    |
| 2020                | 13,713 | 1,201 | 1     | 12,480   | 31    |
| 2025                | 14,493 | 1,161 | 1     | 13,300   | 31    |
| 2030                | 15,240 | 1,130 | 1     | 14,078   | 31    |
| <b>SCENARIO 0.5</b> |        |       |       |          |       |
| 1990                | 9,279  | 1,730 | 1     | 7,517    | 31    |
| 1995                | 10,491 | 1,612 | 1     | 8,847    | 31    |
| 2000                | 11,921 | 1,484 | 1     | 10,405   | 31    |
| 2005                | 13,537 | 1,372 | 1     | 12,134   | 30    |
| 2010                | 15,336 | 1,264 | 1     | 14,041   | 30    |
| 2015                | 17,303 | 1,166 | 1     | 16,107   | 29    |
| 2020                | 19,527 | 1,105 | 1     | 18,393   | 28    |
| 2025                | 21,942 | 1,056 | 1     | 20,857   | 28    |
| 2030                | 24,464 | 1,003 | 1     | 23,433   | 27    |
| <b>SCENARIO 1.0</b> |        |       |       |          |       |
| 1990                | 9,279  | 1,730 | 1     | 7,517    | 31    |
| 1995                | 11,103 | 1,652 | 1     | 9,420    | 30    |
| 2000                | 13,360 | 1,553 | 1     | 11,777   | 29    |
| 2005                | 16,058 | 1,478 | 1     | 14,551   | 28    |
| 2010                | 19,195 | 1,402 | 1     | 17,763   | 29    |
| 2015                | 22,849 | 1,308 | 1     | 21,512   | 28    |
| 2020                | 27,097 | 1,266 | 1     | 25,802   | 28    |

|                     |        |       |   |        |    |
|---------------------|--------|-------|---|--------|----|
| 2025                | 31,892 | 1,216 | 1 | 30,649 | 26 |
| 2030                | 37,207 | 1,171 | 1 | 36,010 | 25 |
|                     |        |       |   |        |    |
| SCENARIO<br>1990-96 |        |       |   |        |    |
|                     |        |       |   |        |    |
| 1990                | 9,279  | 1,730 | 1 | 7,517  | 31 |
| 1995                | 10,301 | 1,613 | 1 | 8,655  | 32 |
| 2000                | 11,652 | 1,489 | 1 | 10,129 | 33 |
| 2005                | 13,296 | 1,385 | 1 | 11,874 | 36 |
| 2010                | 15,109 | 1,276 | 1 | 13,794 | 38 |
| 2015                | 17,072 | 1,180 | 1 | 15,850 | 41 |
| 2020                | 19,214 | 1,097 | 1 | 18,077 | 39 |
| 2025                | 21,560 | 1,022 | 1 | 20,497 | 40 |
| 2030                | 24,025 | 949   | 1 | 23,037 | 38 |

# Determination of Fertility, Mortality, and Migration Rates

## I. Fertility Rates

Age, sex and race/ethnicity specific fertility rates were computed using births by age, sex and race/ethnicity and place of residence of the mother. The numerators for such rates are the average number of births for 1990 and 1991 for mothers in each age and race/ethnicity group and the denominators are the modified population counts by age, sex and race/ethnicity. Birth data to compute the rates were obtained from the Texas Department of Health and data on women by age (10-49 years) and race/ethnicity were obtained from the modified data from the 1990 Census of Population. These data showed total fertility rates for Anglos, Blacks, Hispanics and the Other racial/ethnic group in 1990 that were 1.81, 2.37, 3.05 and 2.01 respectively.

## II. Mortality Rates

To obtain baseline mortality measures, survival rates by single years of age, for both sexes and for each of the racial/ethnic groups were needed. Survival rates for Anglos, Blacks, Hispanics, and the Other racial/ethnic category were computed using death data from the Texas Department of Health. County specific survival rates were computed for all counties with 100,000 or more population in 1990. For all other counties rates specific to their county type (i.e. metropolitan central city county, metropolitan suburban, non-metropolitan adjacent and non-metropolitan non-adjacent) were employed.

## III. Migration Rates

Migration is the most difficult component process to project and for which to obtain baseline rates. For the Texas State Population Estimates and Projections Program's projections, rates were derived using a standard residual migration formula. Thus, life table survival rates by age, sex, and race/ethnicity were applied to 1980 modified census data to produce expected populations for 1990

and subtracted from the modified 1990 populations counts to produce an estimate of net migration for use in the 1980s-based scenarios. A set of rates were also developed for use with a fourth, 1990s-based scenario. These rates were determined by taking 1990 base cohorts, subtracting deaths, and adding births to the beginning of life cohorts for the period of 1990 to 1996 to determine total 1990-96 net migration levels. These net migration values were distributed to age, sex, and race/ethnicity specific groups on the basis of 1985-90 rates of migration derived from the county-to-county migration data from the 1990 census (U.S. Bureau of the Census 1995). These data were only recently released and provide data on the age, sex and race/ethnicity characteristics of in and out migrants to and from every county. Although the absolute migration levels from 1985 to 1990 are not seen as likely to be indicative of Texas long-term patterns of growth, the age, sex and race/ethnicity proportions of migrants were examined and appear to reflect reasonable patterns by age, sex and race/ethnicity. Thus these proportions were used to distribute total net migration values to age, sex and race/ethnicity groups. These distributed values were divided by expected values to estimate 1990-96 patterns of age, sex and race/ethnicity patterns of net migration. These rates were converted to single-year rates for use in the projections.

## Las Colonias Traveling Exhibit

The traveling children's photography exhibit on life in the colonias along the U.S.-Mexico border will be in Edinburg, Texas at the University of Texas Pan American campus from Sept. 1 through Oct. 1, 2002.

This exhibition presents an intimate portrait of life in teh colonias as seen by middle school students in Elsa, Monte Alto and Montana Vista in El Paso, Texas.

The 88 photographs in teh exhibition depict life in colonias, are organized around themes such as family, grandparents, quincianeras, religion, cabritos, education and community.

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## U.S. Census: Residents eking out an existence on an average of \$4,103

**2000 Census**

Of the 10 places nationwide with 1,000 households or more, Cameron Park has the lowest per-capita household income, according to the Census Bureau.

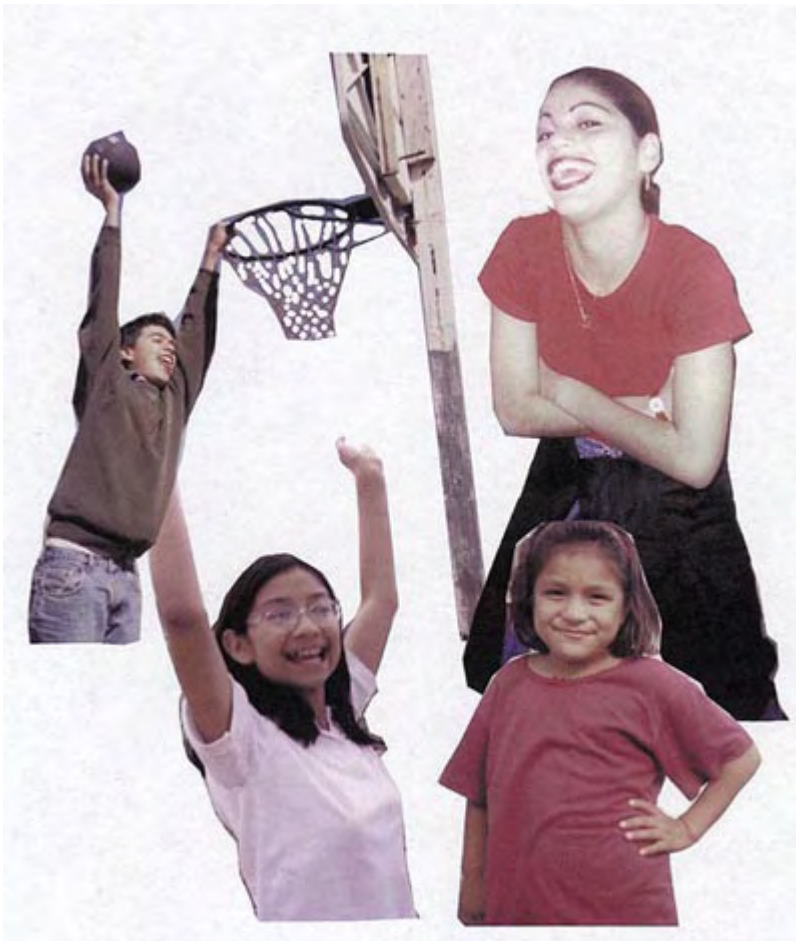
| City                          | Households   | Per-capita income |
|-------------------------------|--------------|-------------------|
| <b>Cameron Park, Texas</b>    | <b>1,209</b> | <b>\$4,103</b>    |
| Mila Doce, Texas              | 1,010        | \$4,221           |
| Kiryas Joel Village, New York | 2,273        | \$4,355           |
| Rio Bravo, Texas              | 1,186        | \$4,566           |
| Progreso, Texas               | 1,035        | \$4,789           |
| La Homa, Texas                | 2,441        | \$5,180           |
| Alton North, Texas            | 1,081        | \$5,259           |
| San Luis, Arizona             | 3,018        | \$5,377           |
| Whiteriver, Arizona           | 1,306        | \$5,719           |
| Hidalgo, Texas                | 1,733        | \$5,849           |

## Information taken from the Census Bureau



# **Pre-College Summer Leadership Camp**

**June 3-16, 2001  
San Marcos, TX**



**Southwest Texas State University**

**Sponsored by: W.K. Kellogg Foundation**

**El Paso Community Foundation**



# Background: Pre-College Summer Camp

During the last two years, Southwest Texas State University has been involved with colonias along the Texas-Mexico border. As a result of this engagement, 100 students from El Paso and Elsa colonias completed a book of photography and testified before a congressional committee in Washington D.C. In addition, a documentary "The Forgotten Americans" premiered at the Smithsonian and was presented by PBS on December 14, 2000 to 62 million households in the United States.

The Pre-College Summer Leadership Camp is another summer colonia initiative developed to enhance the leadership and educational experiences of middle school eighth graders.

One hundred and twenty-five children were selected by their teachers from the following border schools:

**Filemon Vela Middle School  
Brownsville, Texas**

**Memorial Middle School  
Eagle Pass, Texas**

**Edcouch-Elsa Junior High School  
Edcouch, Texas**

**East Montana Middle School  
El Paso, Texas**

**Salvador Garcia Middle School  
Laredo, Texas**

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# Summer Purpose

The Pre-College Summer Leadership Camp's purpose is to inform eight grade colonia students of the educational opportunities that exist, if they take core curriculum courses. The PCSLC will include leadership, algebra, English, physics and technology. The program will also provide students with academic instruction and career guidance. The University will include room and board, instruction, leadership opportunities and on- and off-campus transportation during the two-week stay at SWT in San Marcos, Texas.



*Children from the Colonias were given cameras to document their lives in "Children of the Colonias Project: Through Our Own Lenses"*

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# Participating Professors

|                          |                  |
|--------------------------|------------------|
| Dr. Jaime Chahin         | Project Director |
| Dr. Carlos Gutierrez     | Physics          |
| Dr. Robert Habingreither | Technology       |
| Mr. Steve Medel          | Leadership       |
| Mr. Tony Montalbano      | English          |
| Dr. Harden Rahe          | Leadership       |
| Mr. David Rice           | English          |
| Dr. Max Warshauer        | Algebra          |
| Dr. Selina Vasquez       | Algebra          |

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## Program Activities

- ♥ Participants will receive seven hours of daily instruction in the subject matter
  - ♥ Students will be exposed to career choices and job requirements
  - ♥ Instruction will be complimented with field trips and films
  - ♥ Students will participate in team building activities
  - ♥ Students will learn to pattern a silicon wafer
  - ♥ Students will experience college life in the dorms
  - ♥ Students will complete a short story
-

# Pre-College Classroom Schedule

## *Monday-Friday*

|                     | <b>Group A</b>          | <b>Group B</b>          | <b>Group C</b>          | <b>Group D</b>          |
|---------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| 8 a.m. - 9 a.m.     | Breakfast               | Breakfast               | Breakfast               | Breakfast               |
| 9 a.m. - 11:30 a.m. | Leadership<br>Hines 205 | Leadership<br>Hines 205 | Leadership<br>Hines 205 | Leadership<br>Hines 205 |
| 11:30 - 12:50 p.m.  | Lunch                   | Lunch                   | Lunch                   | Lunch                   |
| 1 - 1:50 p.m.       | Algebra<br>AG101/AG202  | English<br>Flowers 120  | Technology<br>TECH 108  | Physics<br>TECH 107     |
| 2 - 2:50 p.m.       | English<br>Flowers 120  | Technology<br>TECH 108  | Physics<br>TECH 107     | Algebra<br>AG101/AG202  |
| 3 - 3:50 p.m.       | Technology<br>TECH 108  | Physics<br>TECH 107     | Algebra<br>AG101/AG202  | English<br>Flowers 120  |
| 4 - 4:50 p.m.       | Physics<br>TECH 107     | Algebra<br>AG101/AG202  | English<br>Flowers 120  | Technology<br>TECH 108  |
| 5 - 5:50 p.m.       | Break                   | Break                   | Break                   | Break                   |
| 6 p.m.              | Dinner                  | Dinner                  | Dinner                  | Dinner                  |

# Pre-College Summer Leadership Camp



Students took a visit to Advanced Micro Devices in Austin, Texas. They were allowed to put on the uniform that AMD staff must wear when dealing with micro devices.



Jena Moron and her partner learn to communicate without speaking in the Leadership portion of the camp.



While participating in a group game during Leadership, Lymari Martinez, student teacher, cheers her team on.



After Leadership students fill their empty stomachs.





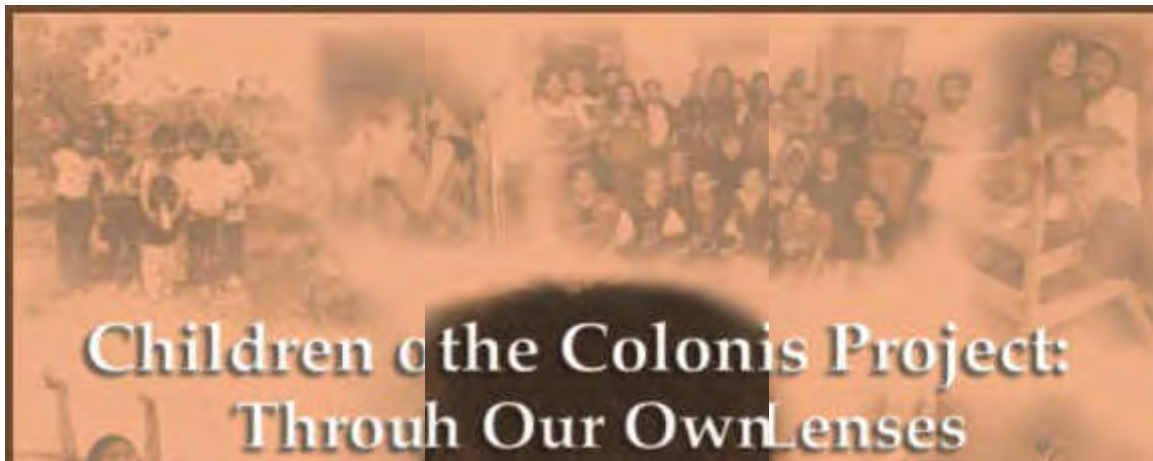
After lunch, students separate to their designated classes. These students listen intently to their math instructor.



Joey Montoya (center) digs into a "archaeological dig" to find ancient items during the Aquarena Springs field trip.



The camp was a great success and we will always remember the smiles of those who participated.



## Our Mission

The mission of "Through Our Own Lenses" is to teach children living in colonias photography so that they can use it as a medium to document and describe their living conditions. These images are a reflection of the children's daily interactions with their families in their communities. This photography book is one of the venues besides a panoramic website and a film documentary that the colonias project used to educate and inform policy makers of issues concerning colonias.

## High Visionary Sparks Within

The Colonias Photography Project includes the work of eighth and ninth graders from Monte Alto and Elsa, Texas, in the Lower Rio Grande Valley, and Montana Vista and Sparks, located on the far eastern desert fringes of El Paso, Texas.

The project's primary objective was specifically to have these students show their own world through their own lenses.



To this end, the project began with each student being issued a 35-mm camera with twenty rolls of film and given the opportunity to freelance and take pictures on their own of their everyday lives. To help facilitate this project, noted documentary photographer Alan Pogue was brought in to provide them with preliminary instruction on the art of photographic composition, while Galen Dickey (assisted by Cristina Salinas) and Sandra Peralta helped guide them and set about collecting their work into photo albums.

The photographs collected in this volume, however, only make up a small portion of the thousands of photographs actually taken by these students. The dozens of photo albums amassed from the students cast an even wider perspective of their lives, so what's gathered here is but a small sampling of their collective photographic work.

Since this photography project was in part based at their schools, many of the images photographed capture many scenes at the students' schools. In Monte Alto, for instance, the middle school sits right next to the community center where the students met for this project. The sheer number of photographs taken at their schools testifies to the undeniable fact that the school life of these students is highly important to them.

Also seen in these photographs are countless images of their families at their homes and of their friends in their neighborhoods. There is a great deal of play, smiles, and celebration captured in many of these images. Some are posed, others spontaneous, but from the desert communities of Sparks and Montana Vista to the rural delta communities of Monte Alto and Elsa, the students' photographs candidly reveal the pride these students consistently have and hold for their loved ones. These images thus show how central their families are in the everyday lives of these students.

Over time and through trial and error, these students have photographed a great many images of their lives at their schools, neighborhoods, and communities. What's



resulted represents a wide array of images showing how they see their world. Whatever one might initially think of the students from these communities, one's view of them will most certainly change after seeing these images. For re-presented here are images of laughter, friendship, and an unmistakable closeness among these students' classmates and families, a closeness no doubt formed by the circumstances of growing up in their colonia communities.

Colonias in the past were collections of ramshackle houses with truly limited or, more often, nonexistent services most city folks take for granted: clean running water, electricity, sewage, regular garbage pickup, natural gas, weatherized homes, animal control, drainage systems, street lights, parks, and paved streets. And this is not even to mention having other services like those of stores of all types, restaurants, financial institutions, schools, police, postal service, doctors, EMS, fire stations, cable TV, and yes, the Internet. As time has gone by, though, many colonias have gained many of these services, unquestionably signaling how high a priority home-ownership stands for colonia residents. An important consequence of this singular priority among colonia residents is that many colonias have become incorporated or annexed to adjoining incorporated towns. But much work to improve the services in these communities remains to be done.

Federal, state, and county funds have of course ameliorated many of the truly dire circumstances which once prevailed among many colonias, as state and federal legislation over time has created multiple agencies to intervene in providing many much needed services. Colonias, though, have also evolved and improved through their own courageous and highly noteworthy community leadership and through the collective efforts of colonia residents themselves.

However, other colonias have since taken root and continue doing so along the US-Mexico border, despite laws in states like California and Texas forbidding their taking root. But what many American people nevertheless fail to remember and understand is the fact that thousands of children continue having to grow up and study for their futures

in such communities. The photographs collected in this volume thus serve as reminders of their presence in these communities and of what their lives are like. If you look closely at the world from their perspectives, you are hardly able to tell that anything at all is standing in the way of their academic success and happiness.

As Americans, we're often told the story of Abraham Lincoln growing up in a rugged Kentucky log cabin and studying by candlelight to acquire those skills that led him and his family to the White House. It's the quintessential story of the American Dream—from a log cabin to the White House. President Lincoln grew up more than a century and a half ago, yet today's students from borderland colonias are often having to study under circumstances arguably and ironically not too unlike those of Lincoln's youth. Maybe it's human nature that causes kids growing up under such circumstances to aspire beyond their limited physical means, as did Lincoln.

Along the US-Mexico border, though, human nature is aided by the resilient cultures of peoples converging to bring all their resources together to rise above their material circumstances. These resources, made up of cultural funds of ethnically based knowledge, represent the glue keeping their families and communities together. At their homes, churches, and schools, among their families, neighbors, and friends, these students' spirits are continuously being rekindled and inspired in order for them to learn more about the world beyond their immediate communities.

Certainly the collective efforts of many in the Lower Rio Grande Valley and the desert communities on the eastern side of El Paso are all contributing each and every day to keep the light in the eyes of these students shining bright. Teachers, like Sandra Buhaya in Montana Vista and Esperanza Salinas in Monte Alto, as well as community center directors and parents fully understand what's at stake with the education of these young students.



For without question, helping these students fulfill their dreams significantly means fulfilling their own. Their vision of what these students can contribute to our society and their communities is filled with the hope and enthusiasm that always comes from seeing new life grow and develop into maturity.



But it's the dynamic vision of these students that is most important here. Seeing the world from their point of view unequivocally confirms what their parents, extended families, teachers, and community leaders see—energetic and living hope for a brighter future. Such hope, after all, has always been what has made this country great. The images contained within this small volume should therefore cause us all to identify with and be proud of their high and bright vision of our future.



Cesar Dominguez

After school as people rush to our little corner store.



Graciela Sanchez

My sister was combing her daughter's hair. Her son was hiding behind my sister because he doesn't like taking pictures.

Graciela Sanchez

My grandfather was eating, and when he saw me with the camera got shy and didn't want to eat anymore.



Brenda Torres

At my grandparent's house. My grandpa's birthday.



Brenda Torres

My cousins are in my grandmother's garden. The photo was taken in Mexico. All of them are between the ages of (1) and (9). My sister is the white one in the back.



Brenda Torres

As my cousin was combing her hair, I called her name so she could turn around for a picture. She is 14 years old. The picture was taken in Mexico.

Amandalina Guevarra



This is my sister Arlaeé Guevara. She is outside trying to be a cheerleader and a dancer. She is outside of my house yelling "Go Jackets" (our football team) just for fun.

Amandalina  
Guevarra



This is my sister's goat; her name is Chiquita. She has a little goat and his name is Kurioso. We named her Chiquita because she was really small and pretty.



Amandalina Guevarra

This is the front of my house; my mom went to buy bread from the Mexican bakery.

Amandalina  
Guevarra

This is me sleeping inside my house, I fell asleep because I was very tired of dancing. I really like to dance.



Martin Rivas

My friends taking pictures of a sugar cane gin. We are coming back home from a track meet.



Norma Trejo

This is my brother; he was in my room looking for a movie. It was the first day I got the camera.



Martin Rivas

A picture of my relatives' horse. He has a ranch where he and his friends raise horses.

Norma Trejo

This picture is my dad's band. I think he wants to retire from playing and pass it on to my brother.







Norma Trejo

This is my sister and her boyfriend. She just woke up and her boyfriend came to visit her. He says he really loves her and wants to spend the rest of his life with her.



Patricia Garza

This woman is the oldest person who has lived in Monte Alto the longest. She is 86 years old.

Patricia Garza

These are volunteer firefighters washing the red fire truck.



Jose Gomez

The trees in my backyard.



Jose Gomez

My cousin posing for a picture.

Jose Gomez

Rain water; it had rained six (6) inches.





Andres Martinez

The pig pen is in my backyard. My dad has lots of pigs, but this is my pig.

Ruth Cano

This is my sister Esther. She had just turned off the computer.



Andres Martinez

This is after a track meet. We were pulling up to Pizza Hut for dinner.



Ruth Cano

These are my two older sisters and my niece in my house. They were talking among themselves and writing to the man that we work with.



Brenda Torres

It was my grandfather's birthday, so we had a party.

Noe Galindo

My dad sitting on the sofa, watching T.V.



Brenda Torres

My aunt and uncle are in love; they posed for the picture.



Noe Galindo

My dad planting grass in our new home.



Noe Galindo

My friend, Jesus, sitting on the sofa talking to my brother



Gloria Garcia

My family "The Garcias" on Easter Sunday

Gloria Garcia

My grandmother (Guadalupe Garcia) with her great grandson (Isaiha Sanchez). It was on Easter Sunday.



Ryan Gomez

My grandpa working on the porch.

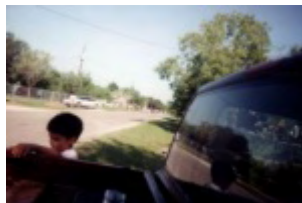


Ryan Gomez

A bird swimming in a canal.

Jimmy Haney

My cousin Zachery is climbing on my truck so I can take him home.



San Juanita Lazo  
(Janie)

Mr. Ramos is a very hard working man. He is on his way to a U.I.L. meet.



Sonia Lopez

My sister and my dog.

San Juanita Lazo(Janie)



A house on Mile 18. It has 14 people living in it without water or a sewer system. The restroom is in the backyard.

Sonia Lopez

My room. I like my bed and my teddy bears.



Jose Luis Loredo

The kitchen of a house.



Thalia Morales

My brother Jaime and my father Lalo are killing a goat.



Vicente Loredo

There are holes in the road, and when the cars pass where the holes are, they jump hard.

Thalia Morales

My father milking the cow to make cheese.





Thalia Morales

My dog and her puppies in our back yard.



Ricky Rodriguez

My brother eating and lying on his bed eating a goodnight snack.

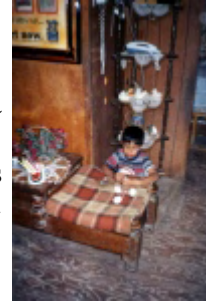
Andy Rodriguez

My brother, Reynaldo, washing a pan by my father's red tool box.



Mayra Rubalcava

My brother getting his Easter Eggs ready.



Eden Torres

My godfather and my father talking about the family in Mexico.

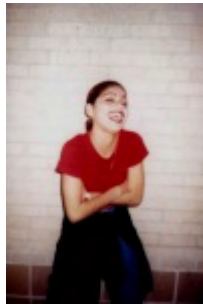
Ana Vasquez

My nephew watching T.V.



Rosinda Torres

My friend Helo.



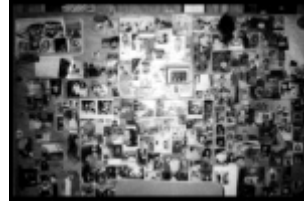
Ana Vasquez

My mother's room. She has lots of pictures of Jesus and the Virgin Mary.





Ana Vasquez  
My sister's house in Mexico.



Janie Lazo  
They say the Virgin Mary appeared on a car on Mile 18 where this picture was taken of miracles waiting to be accomplished.

Ana Vasquez  
My father in Fort Brown Memorial Center.



Danira Zuniga  
Seven year old bull born in '92 has a brand "S" initial of previous owner.



Claudia Martin  
I'm always at this store because it is where my best friend lives and her parents own the store. I can usually get some free candy and other junk food.



Ruben Tovar  
When I get my own car I would like to work on it. I would like to enter contest and show off my work on my car like this one that I liked at the care show.

Elizabeth Ortiz  
My little sister is going to make her first communion. My family is Catholic.



Jaime Torres  
I like animals a lot. This is my dog Oreleo; she is going to have puppies soon.





Elizabeth Moraza

My sisters and I are celebrating my mother's birthday



Rodrigo Granados

My friends and I like to play football in the street in front of my house. I am going to try out for the football team at school this year.

Sergio Hernandez

This is my art project for school. It is a castle made from paper-maché.



Lisrael Moraza

The community center fed me and my brothers lunch at the community center when our house was flooded.



David Facio

This is my house. We have lived here almost 12 years. I wish we could get more trees to shade our house; it gets very hot in the summer time.

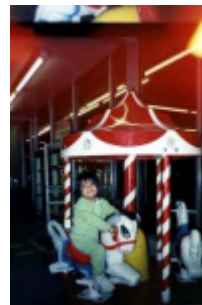


Luis Dominguez

Our neighbor's car was stuck during the flood at our colonia.

Rosinda Torres

My dad bought us this trampoline to play during the summer. My friends come to play with me too.



Ruben Chavez

My baby sister is celebrating her 3rd birthday at Peter Piper Pizza.

Gilbert Vasquez



I love basketball. I would like a basketball gym in my community so I can practice all the time. I practice outside, but sometimes it's too hot or too cold to play

Francisco Anaya



My backyard would look much better if we could have trash service.

Elizabeth Torres

My family and I visit my grandfather every Sunday.



Alicia Contreras

Our kitchen was flooded and full of mud the day of the flood.



Victor Dominguez

This is my mom and dad relaxing outside in the front of our house.



Cristina Moreno

Our Spanish class had a Mother's Day presentation at our school. We sang songs and read poetry in Spanish.

Ruben Reyes

This is another workshop we had to teach us more about our cameras. We also had a teacher who helped us to describe our pictures.



Denise Salcedo

This is a picture of my school, East Montana Middle. I am very proud of my school; it is pretty new and I like to take care of it.







Maria Rivas

This is my mother; she is a Promotora. After working all day she still brings work home. My mother likes helping people.



Adela Garay

Our school is celebrating the 16th of September. These Mariachis are students from UTEP.

Victor Casares

This is the first time I have had my own camera. I hope I can get good pictures.



Ivette Reyes

My aunt and neighbors are very involved in our community. They go to meetings and speak out about some of our problems in the Colonia.



Christopher Romero

Sometimes when we don't have anything to do my best friend and I just sit and talk. We wish we had a swimming pool around our neighborhood.



Gloria Cardenas

My brother graduated from high school. We are celebrating at my house. My mother is dancing with my brother.

Jennifer Lamas

My grandmother has the statue of Jesus and Mary at her house. When I visit her I pray with her.



Rosa Alvarado

My brother and his friends compete at the rodeo every year.





Anais De La Rosa

We went to California for our vacation this summer. I had a good time. I met cousins I never knew before.



Alicia Contreras

I received my confirmation at El Buen Pastor Catholic Church on June 16, 1999

Nancy Garay

This is Alan Pogue; he teaches us about photography. We also had a professor teach us about describing our pictures.



Chris Herrera

I celebrated my 13th birthday on February 24, 1999. My friends and I shaved our heads for the party.



Janet Dunbar

My brothers and I celebrated our grandfather's birthday. Jose Lopez turned 96 years old.

## **Photo Credits:**

### **Rio Grande Valley Colonias El Paso Colonias**

|                    |                    |
|--------------------|--------------------|
| Ruth Cano          | Rosa Alvarado      |
| Alexandria Casey   | Francisco Anaya    |
| Cesar Dominguez    | Gloria Cardenas    |
| Noe Galindo        | Victor Casares     |
| Marisela Garces    | Ruben Chavez       |
| Christina Garcia   | Alicia Contreras   |
| Gloria Garcia      | Anais De La Rosa   |
| Hector Garza       | Luis Dominguez     |
| Patricia Garza     | Victor Dominguez   |
| Jackie Gomez       | Janet Dunbar       |
| Jose Gomez         | David Facio        |
| Ryan Gomez         | Adela Garay        |
| Esmeralda Gonzalez | Nancy Garay        |
| Amandalina Guevara | Rodrigo Granados   |
| Jimmy Haney        | Sergio Hernandez   |
| Magda Jimenez      | Chris Herrera      |
| San Juanita Lazo   | Jennifer Lamas     |
| Sonia Lopez        | Claudia Martin     |
| Jose Luis Loreda   | Elizabeth Moraza   |
| Vicente Loreda     | Lisrael Moraza     |
| Andres Martinez    | Cristina Moreno    |
| Jose A. Martinez   | Elizabeth Ortiz    |
| Danny Morales      | Ivette Reyes       |
| Thalia Morales     | Ruben Reyes        |
| Adrian R. Pequeno  | Maria Rivas        |
| Martin Rivas       | Christopher Romero |
| Andy Rodriguez     | Ruben Tovar        |
| Ricky Rodriguez    | Armando Salazar    |
| Mayra Rubalcava    | Denise Salcedo     |
| Graciela Sanchez   | Elizabeth Torres   |
| Brenda Torres      | Jaime Torres       |
| Eden Torres        | Gilbert Vasquez    |
| Rosinda Torres     |                    |
| Norma Trejo        |                    |
| Ana Vasquez        |                    |
| Janie Zepeda       |                    |
| Danira Zuniga      |                    |

# Literature Review and Recommendations for Alliances with Promotoras Organizations

Promotoras programs are widely used now and are more common in the health than the education field. The Centers for Disease Control and Prevention have a database of such programs throughout the US that is available on-line. Some of these programs are discussed in this literature review. In looking for ways to continue a relationship with promotoras or animadoras groups in the Valley, the literature can suggest some direction. However, it is essential that any outside group wishing to work with promotoras programs, especially a grassroots one such as ARISE, understands that program direction comes from the women who are the animadoras. Outside attempts to direct the organization would not succeed and are contrary to the foundation of the organization.

The lay worker programs in the Rio Grande Valley address various social and health issues. For the purposes of this paper, I am looking at only English as a Second Language (ESL) programs and those that are health-oriented.

ARISE is the group that the Colonias project worked with most closely. Its mission is to develop education programs that build capacity in individuals and add a sense of community among the people. The culture of women that dominate the organization is a striking aspect of the ESL program and other programs at ARISE. Instead of the male-oriented motivation in the workplace, ARISE community members work with a sense of mission that reflects a more female aspect. Sanguinetti (1994) discusses a feminist reflection on empowerment through teaching ESL in Australia. Her paper suggests that empowerment comes from teacher-student solidarity and that a female-centered culture can mediate cultural, class and political differences. It would be interesting to document how the participants feel the ARISE programs influence such differences.

Many ESL programs now focus on empowerment, like ARISE does, and draw from Freire's model. Wrigley (1993) discusses 11 programs including some that focus on personal growth to those that focus on literacy for social adaptation. The curriculum at ARISE includes both personal growth and empowerment and social adaptation as ends but no formal evaluations have been completed. Faiginis (1985) paper specifically focuses on Freirian principles of designing adult education curriculum. The development and testing of curricula in the Valley might be one area to explore, especially if doctoral students would be interested in combining their dissertation with training new animadoras.

## **Resources for training programs are a need at ARISE**

The terms promotora, animadora, paraprofessional, community health advisor and lay health advisor are all used throughout the literature and workplace to refer to workers who are indigenous to the community and who serve and train through a community-based organization as opposed to holding a college degree. Community Health Advisors (CHAs) in immigrant communities is becoming more commonplace. Volunteers and encouraging program retention through graduation ceremonies and certificates are also common among the programs (Shimazu, McFarlane, Eng).

Studies have found that using older Hispanic women as nutrition educators is effective (Serrano, Bell). The Abuela Project in Yakima, Washington looked specifically at behavior changes over 6 months and found positive effects in reducing the incidence of salmonella poisoning. This study found older Hispanic women willing to be trained in making pasteurized fresh cheese. After the training, they signed a contract to teach 14 more people about the new method to prevent food poisoning. It would be interesting to use such a model in trying to effect other types of behavior change.

Baker, et.al. (1997) found that the lay health advisor models provide culturally appropriate, holistic and community centered services that are grounded in local needs as gauged through the input of local members. They found the groups had a positive impact on their communities. The De Madre a Madre program in Houston, whose goal was to reduce low-birth weight babies and reach at-risk mothers, showed promising results after five years. This program has now includes training local women in public speaking, computers, grant writing and leadership skills (McFarlane).

One study looking at the role of lay health promoters found that they are necessary for providing culturally competent care. In spite of efforts to include cultural content into nursing classes, not much progress has been made. It points out that even if such classes were included in nursing schools, thousands of practicing nurses might still lack knowledge for providing culturally competent care. This is the gap that Poss (1999) sees as the niche for lay health promoters. Poss found that of the 269 health care organizations in California that were surveyed, 26% provided lay health promoters or planned to hire them within the next three years. Of the employed health promoters, 55% were paid from ongoing funding and 42% were paid from grants.

Other studies are more lukewarm on the subject of lay health workers. Korfmacher et.al. (1999) found in comparing a Denver home visitation program for pregnant and parenting women that paraprofessionals had lower outcomes than nurses. Nurses completed more visits and had fewer dropouts than paraprofessionals. One interesting finding was that nurses spent more time on physical health issues during pregnancy and on parenting issues during infancy, whereas Paraprofessionals spent more time on environmental and safety issues. The study does not detail what information the client asked for in the colonias it could very well be that environmental and safety issues are of greater concern. The program Su Casa de Esperanza in Pharr, TX provides a similar service, and following up on questions raised in the Korfmacher study would be useful and interesting.

Boyer describes in her midwifery program paper her experiences visiting the Holy Family Birth Services near Elsa, TX. The paper describes the program and suggests benefits that could prove useful and necessary for the colonias residents. A definitive

evaluation would not only add to the literature but would increase validity of arguments for funding of such programs.

Eng, et.al. (1997) presented lay health advisor programs as useful as a complement to the more specialized work of health professionals, but not as a stand-alone program, such as some Community Based Organizations (CBOs) use them. This paper suggests lay health advisors should establish meaningful links to service delivery systems. It offers three basic principles of public health practice for lay health advisors: **1)** A basic assumption is that a natural resource available in most communities is the existence of social networks through which community members offer and receive social support among one another. **2)** The role of the practitioner is to recruit, train, and support community members who can directly reach and offer social support to those in need. **3)** The role of the recruited and trained community members is to serve as a bridge between agencies' formal service delivery system and communities' informal social support system.

The many programs in the Valley that use promotoras de salud are implementing a novel outreach method, and encouraging the participation of members of marginalized communities in mainstream programs. The South Texas Promotoras Organization (STPO) is working toward unifying the efforts of the diverse groups and establishing a communication link. This seems to be successful on some levels, but there is still a lot of work to be done. Accessing one program through a promotora group does not give you access to another. For example, if at Cameron Park you meet with the promotora and are signed up for health services (well-woman exams) through Community-Oriented Primary Care (COPC), you are still perhaps not aware of services that might be free through Planned Parenthood (free birth control pills). For that, you will still have to meet and sign up with the Planned Parenthood promotora. Such challenges are common in our medical care system and are not exclusive to the promotoras programs.

STPO is also working on creating a standardized certification program for promotoras. Rosenthal et.al. (1998) overviews this effort and the Report of the National Community Health Advisor Study includes the development of CHA core role and job competency definitions, evaluation strategies, career and field advancement, and integration of CHAs within the changing health care systems which include managed care environments. Such standardization is positive in that it creates more of a "career" feel for some. However, it takes away from the CBOs ability to create a program tailored to their own communities, from training the CHA to providing services to the community.

## **Recommendations**

The CBOs in the Valley that use promotoras all need practical assistance in grant writing and securing funds to continue with their programs. Most of these programs lack solid evaluation of their programs. As promotoras programs become more common and more competitive, supporting such programs through evaluation over a period of years will be attractive to funding agencies.

There are many areas, as suggested in preceding pages, where specific evaluations would both benefit the agency and add to the literature about effectiveness of lay worker programs. Linking evaluators to agencies is key. Establishing an office of "public health and social service practice" in the Valley at one of the universities would benefit any agencies who appeal for help in grant writing or program evaluation and link up graduate students to projects that are reality-based and necessary. The office could serve as a resource for Valley agencies and a conduit for students from across the country that are interested in exploring border issues. A database of projects needed by agencies could be matched to students looking for internships, dissertation or thesis material, or research practice.

Such an office would offer support when needed by a Valley CBO without the formality or pressure of an on-going alliance. It would also save outside agencies or students from having to approach innumerable CBOs when trying to find an interested party for their new grant or research idea.

Finally, I think such a set up if handled properly, could serve as a point of reference for the Valley CBOs. If the office serves as it should, CBOs will know all parties are acting in good faith. In the past cooperating with outside agencies that did not fulfill their end of the bargain have often hurt CBOs. With this setup, they can dip into the well when they need to, without having to worry that they are dancing with the devil.

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