

Abbreviated Comprehensive Housing
Affordability Strategy
(CHAS)



TERRITORY OF GUAM

***ABBREVIATED COMPREHENSIVE HOUSING
AFFORDABILITY STRATEGY
(CHAS)***

OCTOBER 1, 1991 TO SEPTEMBER 30, 1996

SUBMITTED BY: GUAM HOUSING AND URBAN RENEWAL AUTHORITY

CHAS ABBREVIATED STRATEGY PLAN

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**Comprehensive Housing Affordability
Strategy (CHAS)**U.S. Department of Housing
and Urban Development
Office of Community Planning and Development

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Type of Submission: (mark one)

☒ New Five Year CHAS

Fiscal Years Covered:

(FY91 to 96) October 1, 1991 to September 30, 1996☐ Annual Update

Fiscal Year Covered:

If an Annual Update, mark one:

☐ Parts 4 (Resources) & 5 (Implementation) Only☐ Parts 4 & 5, plus minor changes: (mark those which apply)

Part 1 - Needs Assessment

☐ Narrative☐ Tables

Part 2 - Market & Inventory Conditions

☐ Narrative☐ Tables

Part 3 - Strategies

☐ Narrative☐ Tables

Jurisdiction

Name of Authorized Official:

JOSEPH F. ADA, Governor

HUD Approval

Name of Authorized Official:

Signature & Date:

X

Signature & Date:

X

ACKNOWLEDGEMENT

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The statistical profile provided in the following pages are a product of the Interagency Committee on Population of the Government of Guam done on or between June 1988. We give them full and unbiased credit for the fine analysis presented regarding the description of Guam's population, its age and sex composition, household and family, marital status employment, educational attainment, income data and all of the data found describing Guam's occupancy and vacancy status, house and rental units structural, plumbing, financial, utilization and related characteristics under the section on market conditions.

We thank this committee and the Department of Commerce for the fine work done on the prior year census analysis and tables and graphs and for allowing planners like us to fully use them in our report and plans.

We also wish to thank Alvina Castro and Joann Camacho, two really special people in our administrative staff at GHURA who endured the many hours of typing and graph preparation presented in the CHAS. Without them, the CHAS, would not have been possible. Thank you for the dedication and hard work you did on the document. To Julie B. Maanao, thank you also for your help throughout and Nick Borja and Jesse Naputi for the Astumbo Data.

We dedicate this CHAS Plan to our hard working "boss", Pilar Cruz, may this plan provide the basis for many of your housing dreams in the years to come. You have given us good motivation and inspiration to go to the finish line despite data and related hurdles. Many Thanks!

***B. TRANSMITTAL LETTER FROM
GOVERNOR***

***C. SUMMARY CHAS DEVELOPMENT
PROCESS***

B. SUMMARY OF CHAS DEVELOPMENT PROCESS

The CHAS for the Territory of Guam is the result of a cooperative effort among representatives of the following government entities and private non-profit agencies:

- Guam Housing and Urban Renewal Authority
- Guam Housing Corporation
- Department of Mental Health and Substance Abuse
- Guam Health Planning and Development Agency
- Guam Police Department
- Department of Youth Affairs
- Department of Vocational Rehabilitation
- Guam Memorial Hospital
- Superior Court of Guam
- Department of Public Health and Social Services
- Mayors' Council
- Advocacy Office
- Alee Shelter
- Autism Society of Guam
- Catholic Social Services
- Commission on Persons with Disabilities
- Guam Association of the Deaf
- Guma' Mami
- Guma' San Francisco
- Marianas Association for Retarded Citizens
- Parents/Agencies Networking (Client Assistance Program)
- Sanctuary, Incorporated
- Western Pacific Association for the Disabled

The Guam Housing and Urban Renewal Authority assumed the lead role in the development process. These agencies were initially requested to provide statistical data and information on their areas of responsibility. Meetings were held to gather information on the Territory's needs for housing, rental subsidies and other assistance; to review the preliminary assessment, needs and strategies for meeting the needs; and to discuss and finalize the CHAS.

SECTION I
COMMUNITY PROFILE

SECTION I - Community Profile (An Assessment of the Existing Government Housing Component System)

This section describes our overall assessment of our housing shelter problems and the institutional setting under which housing needs are being met outside the private sector component. It also describes government policies and intergovernmental cooperation taking place in the territory affecting housing.

Guam Housing and Urban Renewal Authority (GHURA) and Guam Housing Corporation (GHC) have been the primary government agencies involved in the past in addressing the housing needs of middle and lower income people in the community, GHC initially through the granting of loans to families/individuals rejected by at least three banks; and GHURA through the provision of federally assisted housing projects and developments and rental subsidies for low income families. Within the recent years the Guam Economic Development Authority Agency (GEDA) got involved in housing by assisting developers in obtaining bond financing to build housing of which a given percentage were supposed to be made available for low income families and individuals. Several housing projects came out of this effort, an 81 unit apartment in Tamuning and another in Chalan Pago, but the project got immersed in several entanglements so as a result, the developers from these remaining projects got out of the program prior to the completion of their respective projects. In the latter years, GHC instituted other loan programs and services some of which are mentioned in other sections of this CHAS Plan.

Our evaluation of relevant public policies, our institutional setting affecting housing and our observations of the level of intergovernmental cooperation in place presently are described in this narrative:

Political Commitment to Shelter:

Guam does not have a territorial shelter strategy or plan presently; although under the CAHAT Bill, ready to be signed into law as PL 21-99, a Housing Master Plan is being proposed for a large housing development in Mangilao. There is a Community Development Block Grant Plan, this "affordable housing strategy" or CHAS plan and related components addressing low income housing and homeless housing and special needs of certain groups within the population such as the elderly, mentally ill, handicapped, people with aids, and related populations and rent subsidies under GHURA. Also, the Governor made a definite commitment towards exploring "Affordable Housing" strategies as a concept and plan to address a developing territorial "housing crisis" resulting from the following factors which have severely taxed the local housing scene over the past five years:

1. A large influx of off island investment/investors in land buying, hotel, condominiums, golf courses and apartment developments which have raised land, housing and rental prices to an inordinate level placing costs and rentals well beyond the reach of low income, single wage earner households and even many middle income families.
2. A large influx of "Micronesian" migration and other increasing migration into the territory over the last few years which are seemingly drying up the low rent housing supply available from the private sector and housing unit supply of low cost and substandard housing.
3. A dwindling supply of housing units available for low rent housing subsidies from the private sector and limited number of publicly assisted housing units for low income families.

4. A growing concern among island residents that Guam is in a threshold of "over building", "runaway development", high housing and land costs, and that there is an unacceptable number of outside/foreign investment and ownership of properties.
5. A growing sense of unhappiness over the perception by small and single property land owners/residents that only big or "moneyed" developers can easily get variances from the Territorial Planning Commission because they are pro development; and that the "master plan" or land use controls are being largely ignored or circumvented by the planning body, the legislature through special interest legislations (changing the zoning on land parcels without public or TPC input) and/or little formal analysis from agencies charged with some land use review responsibilities.
6. The absence of low interest financing and that allowing for low down payments is a constraint against the housing industry since most lending institutions allow for loans of only 80% of the total cost for housing and land. Additionally, many construction firms have more projects than they can handle presently so are not too interested in projects costing less than \$100,000. It is expected however that in the coming years as the island gears down its' construction boom, these construction companies will begin to address the needs of people seeking contractors to handle lower cost building and repair projects. Outdated tax laws and provisions enacted under the federal Tax Reform Act of 1986 and 1987 do not offer much incentives to real estate developers and corporations so that they can be encouraged to build affordable housing. There also appears to be a certain degree of uninhibited speculation in real estate, and a general lack of enticing benefits for homebuyers to be motivated to build or invest in second homes. Dwindling federal appropriations for housing for the poor is also a reason for the housing situation locally. Federal labor laws also add to the cost of housing with their stringent monitoring requirements. Compliance requirements under local subdivision regulations are costly. The high cost of requirements to conduct environmental impact assessments and the increasing costs associated with preparing zone change requests and higher surveys and mapping cost have all added to the increasing cost of labor and housing development. These serve as possible barriers towards providing an environment of growth in the housing industry over the past 7 years or more. This is probably one of the reasons why the only vacant housing units largely available are these costing in the neighborhood of \$200,000 or over which are out of reach of even middle income island families.

There is an informal working cooperative network of the three territorial agencies vested with some aspect of economic development, government housing loan and public housing and low rent programs on Guam, namely GEDA, GHURA and GHC. These agencies are presently attempting to coordinate efforts at working towards a common housing interest strategy. Thus as such, these entities may be likened to be an informal Human Settlements Committee who could assume the planning, implementation, monitoring, and evaluation of a territorial shelter or housing strategy. Given the small size of the Territory of Guam, one can say the representatives of the three agencies mentioned comprised somewhat a balanced representative of knowledgeable men and women on shelter problems. The private sector involvement needed to look at the bigger picture of housing including the addition of other government representatives from public works, land management, budget, revenue and tax, planning, needs to be explored further in a more substantive manner in the near future. Tax laws and regulations affecting housing and land use and development policies and federal labor laws need to be examined to ascertain whether it is hindering housing development or adding to the high cost of housing within the territory substantially.

Sustainable Development Policies:

There is no official adoption of a sustainable natural resource policy and a comprehensive energy policy has not been adopted yet. There is however, an energy office charged with examining all energy proposals being developed on a national level and energy technologies which are being tried here within the government and the private sector system. There is legislatively enacted laws and compliance with national (U. S.) water and air quality standards. There is no articulated territorial public health policy dealing with overall standards for sanitation and refuse disposal. There are pieces of regulations on industrial waste and hazardous/toxic waste management, but a lot are partly federal guidelines followed by the territorial entities tasked with monitoring industrial waste and/or disposing of refuse or dealing with sanitation problems. There is beginning to be some interest focused on land use issues, but all of the entities involved in resource management are not as yet unified or doing any comprehensive evaluation and planning directed at looking at the broader and overall "national resource" system affecting land, air, and water. The government however is presently via a consultant group attempting to obtain comments and consensus from the community about future development, what they wish to see with respect to land and community development.

Macro-economic Strategies:

There is very little linking of shelter-sector policies to the overall macro-economic policy framework; and program co-ordination between the shelter sector and other sectors of the economy is occurring mainly with air, water and land pollution control and sanitation requirements. The business community responded in a positive way to housing concerns through heavy housing investment. The definite linkage between economic development and housing is in our viewpoint not readily seen in government planning however. Despite this there is overwhelming evidence of an unprecedented growth of building and investment like is never seen before in housing, hotel, condos, apartments and related building over the past five years, but the corresponding infrastructure development occurred at a slower pace compelling the government to come up with "quickie" solutions on certain projects such as charging "user" and development fees to assist in some of the infrastructure burdens and costs taking place in certain areas.

Moreover, the government in response to the unprecedented growth in housing which have escalated land and housing cost and rental rates beyond the reach of the low and middle income, has enacted a flurry of legislation over the past five years to meet the growing absence of "affordable" housing and low rental rates on the Guam market and in an attempt to mitigate the growing housing crisis.

Some of the government's recent legislative initiatives included:

1. Public Law 19-34 which authorizes Guam Housing corporation to make loans to low and moderate income families to purchase or build homes and allow loans of up to 97% of the appraised value of property and improvements.
2. P. L. 19-51 allows some addition, alternations and repairs without a building permit.
3. P. L. 19-52 allowed for the sale of 11 lots for \$2,500 per lot.
4. P. L. 20-72 allows for the survey and mapping of the Pigua Subdivision in Merizo for the landless.
5. P. L. 20-104 appropriates 1.5M to complete 82 elderly housing units in Agat, Dededo, Merizo, and Talofofo.

6. P. L. 12-109 establishes a Home Local Subsidy Program of 1989 allowing Guam residents who have nonpermanent homes and unable to get conventional financing to be able to borrow \$75,000 for construction and \$25,000 for land purchase.
7. P. L. 20-113 establishes preferences for the sale of lots in Astumbo Subdivision for land to be sold at \$2,500 per lot to qualified individuals. Over \$9.2 M has been appropriated for Astumbo improvements.
8. P. L. 20-189 establishes Inarajan land for the landless Subdivision Act of 1990.
9. P. L. 20-120 makes \$3.0M available for low interest loans of 6% per annum. Home loan limits are \$80,000 for house and \$50,000 for land or up to \$130,000 per loan.
10. P. L. 20-225 establishes as Affordable Housing Program for "affordable" homes to be built by GHC.

Policy coordination within the territory, are gradually appearing in some instances, but more steps need to be taken to achieve the important links needed between income, employment, housing, financial and fiscal components of the territorial wide program system.

Links Between Shelter Objectives and Settlement Management:

National and Territorial strategies with respect to shelter differ markedly on Guam than for the mainland continent. The main linkage for shelter comes from the fact that with respect to housing, almost all of Guam's housing needs as it pertains to "public housing" are largely being met through federal funds which is presently on the down turn as it has been historically over the past years. We are an eligible and authorized public housing authority and hence entitled to receive all of the housing funding that we are eligible to apply for as a territorial entity. So in this sense, we do have a linkage with a "national" housing strategy. We do not have a real issue or problem with respect to small and intermediate settlements of people. Additionally, though we have areas that could be described as "urban" and "rural", we don't have large bodies of specific people or groups or settlements who need special attention with respect to planning for their special needs. The growing number of families and individuals immigrating to Guam may however necessitate special planning efforts for us in the coming years. We do have areas though where "low income" or "elderly" housing units are built and so in a sense are small developments of concentrations of "low income" and "elderly". We also have certain areas designated by the government for people without lands to settle on providing they qualify and are selected. We don't have "slums" or "ghetto" areas like is found nationwide in that low income families are pretty much scattered throughout the villages or districts. Also though there are many Filipinos residing in Dededo, there are few areas where certain ethnic groups are concentrated.

Identification of Needs and Resources:

There is some attention being focused in this area from a territorial standpoint. The effort exerted by the territory however, is still in a very "elemental" or "embryonic" stage. A GHURA affordable housing plan, CHAS, is being prepared through this document to identify the specific needs of the most needy, special needs of the homeless, the handicapped, the low income, low moderate income for housing and rental units. We are also looking at the possible mobilization of planning, funding and related resources which can be harnessed from related agencies, the private sector, lending institutions, and federal funding. The future updates of CHAS will also seek to involve developers, investors, and designers in the planning

and development of the CHAS plan. A housing study is out for bid by GHC and GEDA to identify Guam's housing needs on a broad basis. This is expected to result in a major housing development plan once completed for the Pagat, Mangilao area. If the Lada Estates obtains appropriate financing through GEDA auspices or bond financing, a \$30 to 40 million dollar housing investment will come about resulting in the building of some 200 to 400 homes costing between \$80,000 to \$130,000 per unit.

Some "needs" assessment were done in the past decade by GHURA, which resulted in two completed urban renewal projects and a third still underway plus the construction and development of an 82 unit elderly housing project and several completed low-income housing projects amounting to a total public housing stock of 751 and 1,423 rental subsidies to assist families via the existing Section 8, Moderate Rehabilitation and Voucher Programs of the Guam Housing and Urban Renewal Authority.

Participation and Representation:

As the future planning and development of our "affordable housing strategy" progresses, all of the actors involved in the future production, improvement and use of shelter will hopefully be afforded an opportunity to participate, offer comments and or assist in the formulation of the plan. Opportunities for various future roles of non-governmental participants will have to be sought in financing, planning and designing strategies since federal sources of housing funds are becoming more and more scarce, limited, and are not quite focused on the needs of small insular areas like Guam but on national interests.

Institutional Coordination:

From GHURA's perspective, we do have a clear idea of all of the governmental and private agencies providing direct and indirect services, and these which have key role in the territorial housing issue. We are coordinating closely with the Department of Public Health and Social Services, AHRD, Catholic Social Services, Sanctuary, and other organizations providing human services, recreational and related services to low income families, the elderly, homeless and mentally ill, like the Mental Health and Substance Abuse Agency and the Department of Parks and Recreation. There are some recent government initiated innovations being tried locally in the establishment of new institutional and co-ordination mechanisms such as partnerships with developers and lending institutions. Some of these initiatives do involve the transfer of financial and human resources to discharge new responsibilities in shelter management and services. There is good to excellent coordination between housing and provider organizations and agencies, but coordination of other human resources government wide such as those agencies tasked with roads, transportation roles, etc have not transpired to any large degree.

Human Resource Development:

There are resources available for manpower training for professionals skilled workers and trainees for jobs associated with housing and those engaged in infrastructure projects through a variety of institutions and employing many different methods but it is not coordinated from any central point to insure every job type training is covered and is not inclusive. Other than sporadic private sector or public sector effort such as through the University and Guam Community College and Chamber of Commerce and other private bodies, there are few arrangements to stimulate policies for cooperative wage policies, tax or subsidy arrangements to promote employee participation. Many of the public and government sector institutions do have informal career development opportunities and the government does have programs to enable employees to improve their skills or secure higher educational degrees.

Land Management:

The Territorial Government has government owned properties which it has made available to qualified landless and low income families; however, the Government is not able to meet all such needs though it allows for land to be rented for agricultural and limited residential purposes. We do not have any significant problem with people occupying lands on an illegal basis (squatters) nor "slums" like is found nationwide and in Third World Nations. The government has also made some low cost homes available for rental and/or sale. It also provides some subsidy for rental for low income and low moderate income families through GHURA. There has been some limited improvements in improving land information and documentation. Families in the public housing programs have been allowed ownership opportunities through GHURA 500, and programs designed towards assisting families interested in home ownership will continue to be initiated under GHURA of their housing stock.

Infrastructure Management:

There is very little promotion of a range of low-cost technologies, including the use of local materials for infrastructure development. We also see very little incorporation of low cost technology information in formal and in service professional training entities locally, but a lot of this type of training is available nationally. There has been some initiatives tried already by the territorial government to recover cost, and develop user-charges to met some of the cost of required infrastructure development. The possibilities of financing and operating infra-structural system by the private sector was initiated several years ago. Guam Housing Corporation will attempt to look into these types of material/design technologies in the CAHAT program which will seek to build 2,000 to 2,500 homes over the coming years in Pagat, Mangilao.

Though there was a lot of earlier planning to insure an adequate water supply, there is currently a lot of pressure to concentrate on the provision of infrastructure to meet the need for water sewage, sanitation, and related areas such as pollution control. We do not see any evaluation directed at reducing the per capita cost of infrastructure; by adopting inexpensive and resource conserving technologies except perhaps as it affects air-conditioning costs. The government does have some preventive maintenance programs for public buildings and roads, etc.

Housing Finance:

GHURA, GHC and GEDA recognizes the need to insure that the territorial government foster an appropriate environment for the mobilization of funds; and that all those entities engaged in financing housing should be a part of an overall effort to strengthen and develop the financial system of the territory to facilitate the promotion of savings and efforts directed at reducing costs and improving the efficiency of financial intermediaries. The shelter agencies affected are already addressing the issue of mobilizing a steady flow of long-term financing from a local and federal cooperative mixture. The need for addressing financing alternatives for people in need of loans and rental housing will be further addressed in the housing study and subsequent plan which are slated to be developed upon the availability of available data. A limited amount of construction and rehabilitation loans and grants is expected to be generated for the to be completed Asan renewal project which will be supplemented by federal grant monies the housing agency is expected to apply for annually. Additionally the Governor has successfully organized a consortium of banks to offer low interest rates and down payment and make available over 10 million dollars in home loans. He is additionally looking into making more monies available for

housing by getting the Retirement Fund to be more involved in using its funds for home loans. There have also been a lot of recent appropriations opening the doors for increased housing loans, sale of government lands at below market rates making more government land available, allowing for a 5% down payment and "soft" second mortgages.

Building Materials and Technology:

The territorial government has not done any official surveys and assessment of raw material production. It has done a little in strengthening training activities to develop the construction work force by engaging in an apprenticeship program formerly done by the Navy. However, the local government has not done any activities geared towards selecting technologies and building materials to encourage women's participation in the construction industry though AHRD has encouraged and trained women to enter fields predominantly represented by men.

Targeting of Subsidies:

On a Territorial level, there is few, if any, ongoing review of subsidy policies for shelter; and little with infrastructure projects, directed at targeting it to the needs of the poor, disadvantaged, women-headed households and special need groups. There are assessments on a national level regarding subsidy systems designed towards linking housing and the infrastructural needs of the poor, although many of these programs done in the past were largely under funded such as Model Cities, social and human services in housing programs in the "slum" areas, and "shelters" aimed at improving housing conditions close to cities and in the slums. Locally, there has been limited discussion of such proposals, and initiatives in these areas still need to be developed.

Monitoring of the Shelter Sector:

A significant percentage of shelter or housing data is secured through "census surveys and/or special studies or surveys. It has been conceded that there are some flaws in the national census survey resulting in an under measurement of people in need of housing and in determining the quality of existing housing supply for rental and housing units.

Locally only a limited amount of data is being gathered, tabulated, and assessed. Most data is secured through special survey directed at giving specific agencies special information it needs to plan for their internal activities. It is hoped that though the housing study, housing, mortgage lending institutions, the university's community development institute, the territory's planning and commerce agencies, GEDA and other related agencies will all identify the key variables; they all collectively need to measure the performance of the shelter sector to facilitate the establishment of territorial data base on shelter sector performance which would include gender-specific analyses on the role of women in the construction sector, in the community-participation process, and barriers to women's access to land, housing finance, and construction sector employment of women.

PART 1

1. NEEDS ASSESSMENT FOR OVERALL TERRITORIAL COMMUNITY

Part I 1. NEEDS ASSESSMENT FOR OVERALL TERRITORIAL COMMUNITY

Present Needs: Current 1990 Data

Guam's total population according to preliminary data received from the Department of Commerce increased from 105,979 in 1980 to 133,152 in 1990. This is an increase of 27,153 people and/or 25.5 percent over the ten year period:

The northern area increased from 47,603 in 1980 people to 62,614 people in 1990 an increase of 31.5%.

The central area increased from 34,526 people in 1980 to 41,618 in 1990 or an increase of 20.5%.

The southern area increased from 23,870 in 1986 to 28,920 people or an increase of 21.2%.

The population increase by village and percent change between 1980 and 1990 are shown on Tables 19.01, 19.02, and 19.03. The Department of Commerce has just this date, March 16, 1992 made available some other limited breakdown of the 1990 Census data so we are presenting that here on a summary basis. As was true of the prior decade, the current movement of the population to the northern area is continuing. Of the increase of 27,183 people in 1990 15,011 are found in the northern area, 7,092 are in the central area and 5,050 are in the southern area.

The future updates of the CHAS plan will address other element of the population's characteristics from the 1990 Census. It is very likely that the 1990 data will show that a large number of these latest increases in population reflect migration of citizens, namely young people of working age and families with young children from Micronesia looking for better employment opportunities and a continuing migration of persons age 21 and above from the Philippines and migration from Asian countries such as Korea, Japan and Taiwan/China.

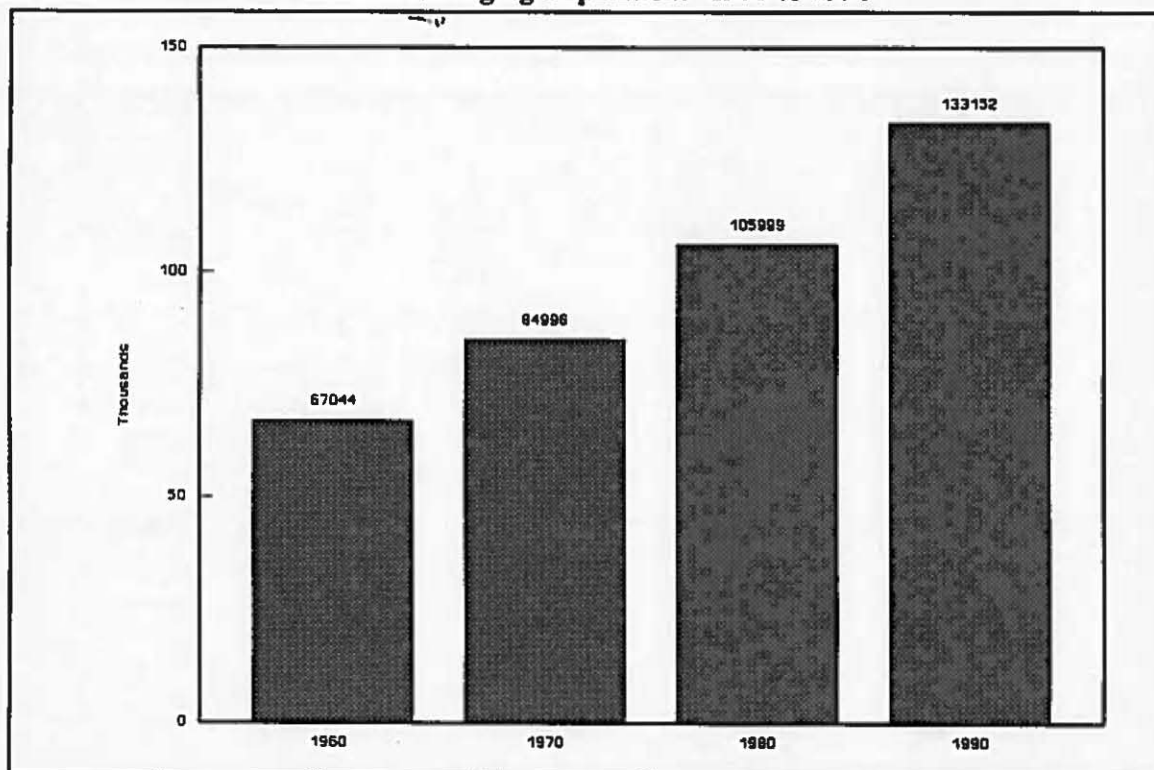
In 1990 only 43.2% or 57,648 people were Chamorros as compared to 1980 wherein 45.1% were Chamorros or 47,825 people considered themselves Chamorros. In 1990, 22.6% or 30,043 people were Filipinos as compared to 1980 wherein 21.2% or 22,447 people were Filipinos. There were 6,509 Micronesians and Pacific Islanders in 1990 as compared to 1,685 Micronesians in 1980, about 4.9% were Pacific Islanders of the total 1990 population. In 1990 only 14.4% or 19,160 of the population were classified as whites whereas in 1980, 25.4% or 26,901 were considered whites. "Others" which includes Asian showed 16.4% of the population were under the "other" category in 1990, whereas in the 1980 census 8.3% or 8,806 were classified under the "other" category.

There were 5,230 elderly in 1990 which constitutes about 3.9% of the total population who are age 65 and over. In 1980, 3.0% of the population were elderly. The median age of the population in 1990 is 25 years versus 22.2 years in 1980. The median "household" income in 1989 is \$30,755 as compared to \$15,752 in 1979.

The median "family income in 1989 is \$31,178 as compared to \$16,203 in 1979. The Per Capita income in 1989 is \$9,928 versus \$4,793 in 1979. The median household, family income and per capita income doubled over the past 10 years.

Table 19.1

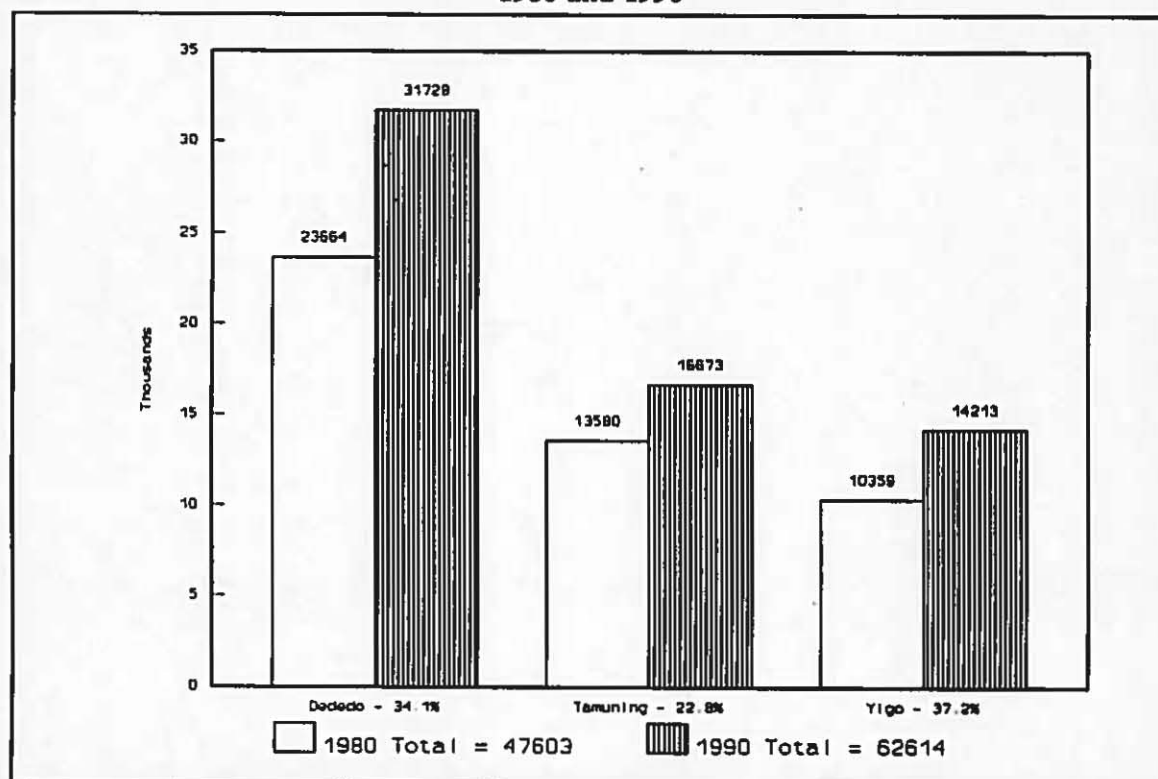
Guam's Changing Population: 1970 to 1990



SOURCE: Preliminary Census Data, Department of Commerce

Table 19.2

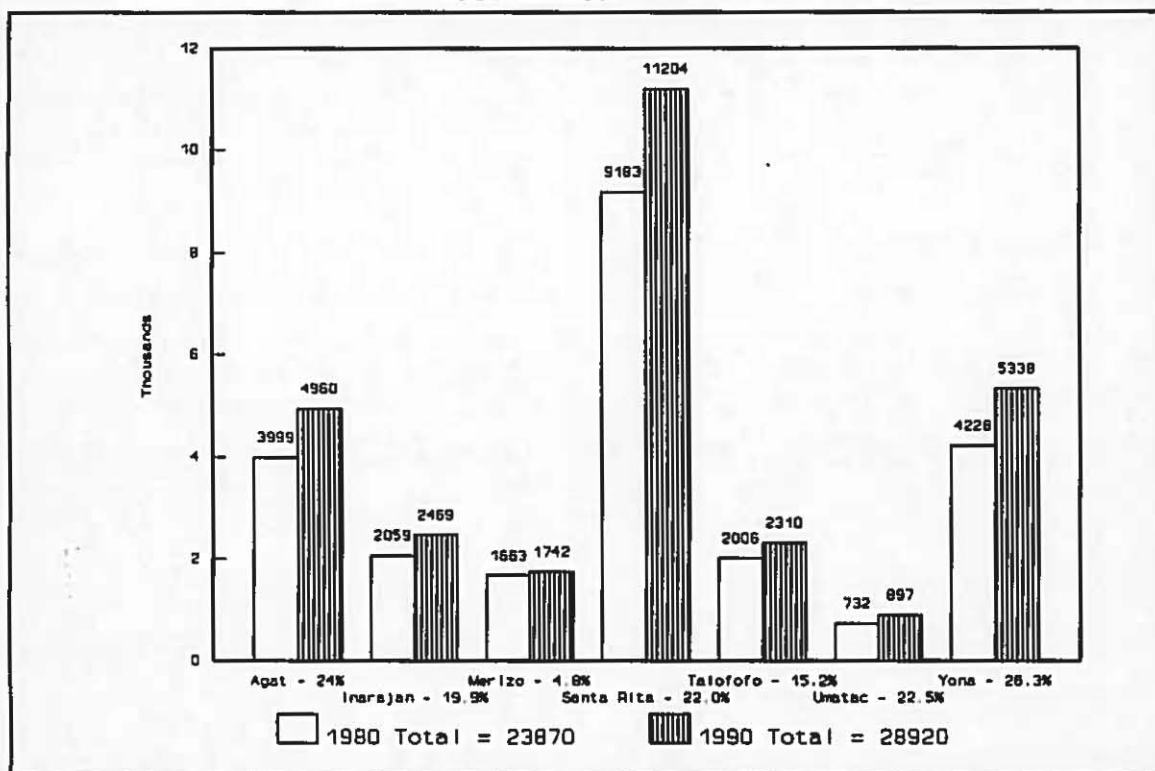
Total Number of People by District
in Northern Area and Percent Increase
1980 and 1990



SOURCE: Census Data, 1990, Department of Commerce

Table 19.3

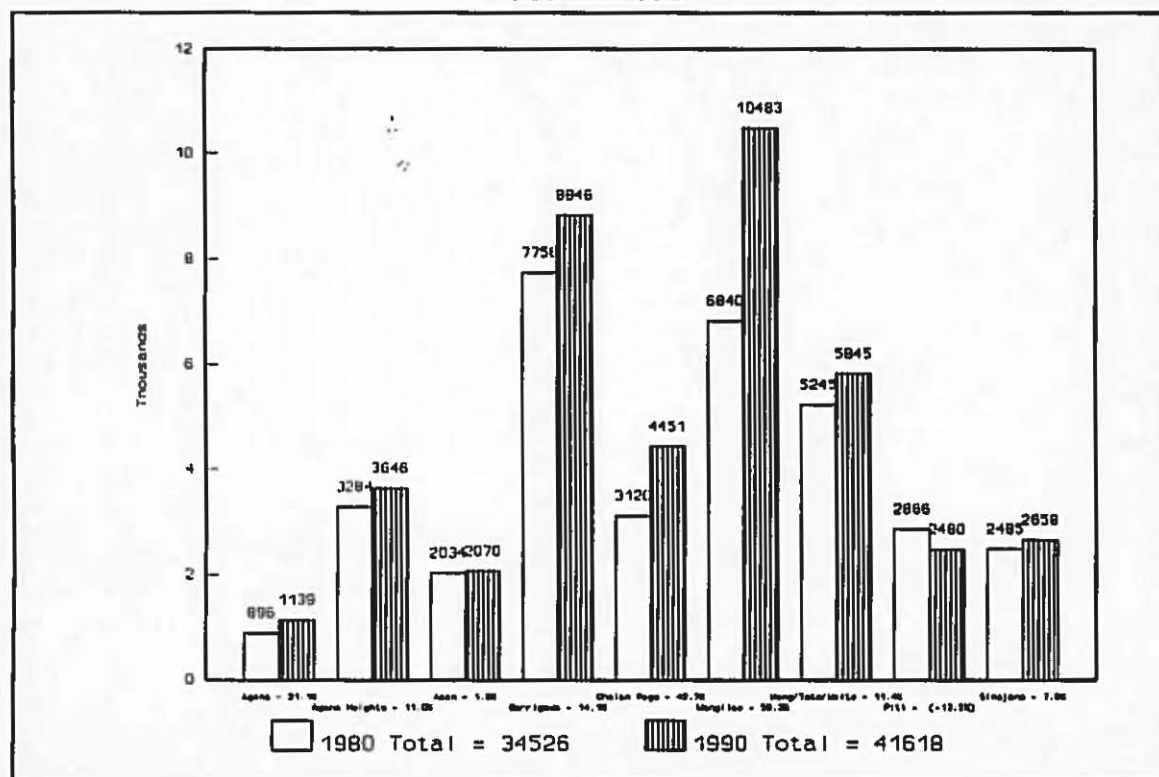
**Total Number of People by District
in Southern Area and Percent Increase
1980 and 1990**



SOURCE: Data, Department of Commerce

Table 19.4

**Total Number of People By District
in Central Area and Percent Increase/Decrease
1980 and 1990**



SOURCE: Census Data, Department of Commerce

a) GENERAL SUMMARY OF FINDINGS AND TRENDS FROM EARLY PERIOD TO 1980

The plan has provided a wealth of data about Guam's past; noticeable trends have been pointed out as being likely to continue to 1980. A short summary of each component is presented below.

A short history of the island was presented and it was shown that a shift in geographic distribution of the population from the Central to the Northern region had occurred in the last 20 years.

The section on age and sex distribution of the island's population, demonstrated that the population distribution of the island was not "normal" due to the military presence and immigration here. While Guam's median age was less than that of the U.S., the population was still aging. The median age of the civilian females was higher than civilian males; the opposite was true of the military, and the military median age was higher than the civilian. The proportion of Guam's population that was under 5 years old was about 12 percent; the proportion of elderly was 3 percent.

From 1930 onwards, the sex ratio of the population was greater than 103; it was 109 in 1980. The sex ratio was higher for the military than for the civilian population. The dependency ratio was 60.5 in 1980. The military dominated in the populations less than 5 years old and from 20 to 34, while civilians were predominant at all other ages. Special tabulations done to separate the military and civilian populations did not have accurate methods to desegregate dependent spouses whose husbands were not in the home, thus causing surpluses of civilian females in some age groups.

The average household size decreased from over 5 persons per household to just over 4 in 1980. The distribution of households mirrored that of persons, moving from the Central region to the North. The South had the largest household sizes for many census periods, but the percentage of households located there has steadily decreased since 1960. The proportion of households headed by females with children under 18 years of age has increased, married couple families with children less than 18 has decreased. The elderly were living in family households in 1980, either their own or a relative's; few were institutionalized. With the opening of the first senior day care center in 1987, the institutionalized population may increase by 1990.

Both marriage and divorce were increasing between 1970 and 1980 the number of divorced males grew by 16 percent and divorced females by 78 percent. The number of separated males increased by 41 percent and separated females by 50 percent. The age at first marriage of females increased by 8 percent, showing that females were delaying first marriage, most likely in favor of finishing school and starting careers. By geographic region, the North had the highest proportion of married persons and the Central area the greatest number of those single, widowed, or divorced.

Between 1980 and 1984, vital statistics showed the Japanese contributed the greatest number of grooms, with Chamorros second; this was true for brides for most of that period as well. White males were most likely to get divorced during this period; for females, Chamorros were most likely. For both sexes, Chinese were least likely to get a divorce. Chamorros and those of "Other" races were most likely to be in same-race marriages, while Whites were most likely to be in mixed-race marriages. For all five years, Caucasians had higher rates of both same-race and mixed-race divorces than any other ethnic group.

Both census and vital statistics data show fertility is still high, compared to U.S. figures, though it is slowly decreasing. The average number of children has decreased from 3.20 in 1980 to 3.15 in 1985.

The mean length of a generation, the time it takes for a woman to have a female child to replace herself, fell from 27.2 years in 1980 to 26.4 years in 1985.

Mortality is also decreasing, mostly due to improved living conditions. Guam is experiencing an epidemiological transition, where the cause of death has changed from communicable diseases to chronic diseases. Recent death data show that both males and females die most often between 45 to 64 years of age, but more males do so than females. Chamorros, Filipinos, and Caucasians die proportionate to their presence in the overall population. Life table analysis has shown that life expectancy at birth has increased for both sexes between 1971 and 1981, but more so for males than for females, though females have a higher life expectancy than males.

With respect to migration, it was shown that 51 percent of Guam's population in 1980 were migrants. When the military was removed, only 40 percent were migrants. The United States and Asia were the greatest source of migrants to Guam. The most common period of migration to Guam was between 1979 and early 1980, except for those from the Philippines, who came most often between 1960 and 1969. The majority of migrants were between 20 and 64 years of age, in the labor force here, and were born in the same location as their fathers had been. Many persons who had lived away from Guam between 1970 and 1980 came back in the period 1979 and 1980. Most had been away for over 6 years; the main reason for their absence was either service in the Armed Forces, or attendance at school.

Chamorros continue to be the largest single ethnic group on Guam though at the lowest levels recorded in any census this century. Whites were second in numbers here, Filipinos third. The proportions of Whites and Filipinos has been increasing, that of Chamorros decreasing. Fully 78 percent of full Chamorros were born on Guam, as were 61 percent of part-Chamorros. The median age of Chamorros was the lowest of any ethnic group, Filipino's was highest. Almost 60 percent of part Chamorros were less than 15 years of age, as were 40 percent of full Chamorros. Whites were 20 to 44 years of age, Filipinos were 35 to 44 years. About 2 out of 3 of those 16 years and older were in the labor force; only 55 percent of Chamorros were in labor force, compared to 70 percent of Filipinos and 80 percent of Whites. This was partly due to small numbers of Chamorros in the Armed Forces or working only part time. Those in the "Other" ethnic groups represented only 9 percent of the population but 63 percent were in the labor force. By industry, Chamorros were mostly in the fields of public administration or professional and related services, Filipinos in retail trade or construction and mining, Whites were in professional and related services or retail trade, and others were in retail trade or construction and mining. Of the population 5 years and older, 36% spoke only English at home; except for Whites, no other group spoke only English in more than half of the homes. Less than 1 percent spoke no English at all. Older persons were less likely than younger ones to speak English at home.

With respect to education on Guam. Both school enrollment and educational attainment have increased since 1940, but the magnitude of the increase was somewhat moderated by the presence of the military. The proportion of the population who had completed 4 years of high school increased from 5 percent in 1940 to 66 percent in 1980, while the proportion completing 4 years of college increased from 10 percent in 1940 to 11 percent in 1980. The proportion of college graduates increased for males (8 percent in 1940 to 11 percent in 1980) and decreased for females (12 percent in 1940 to 11 percent in 1980). It was found that a child's home language affected his high school completion rate: those who spoke another language at home had rates that ranged from 13 percent overall to 18 percent for those who spoke their other home language more frequently than they did English.

Under the section on labor force it was noted that female participation in the labor force doubled between 1970 and 1980, especially for those with children under 18 years of age. Persons born in the United States (80.6 percent) and Asia (69.4 percent) were more likely to be in the labor force than those born

in other places, most notably the former Trust Territory (53.1 percent) or the Commonwealth of the Northern Marianas (49.7 percent). Persons from the latter locations most often come to Guam to pursue a higher education. Those with higher levels of educational attainment were more likely to be employed.

Private sector employment has increased since 1970, with retail and wholesale trade showing growth. Though construction did not show growth, it is expected to do so after 1980. Agriculture, small industry and selected services are expected to show large amounts of growth by 1990. Female employment has steadily increased in the past 30 years. In almost all industry categories, female employment figures show steady increases. Although it is certain that the female labor force is holding a larger portion of the Guam job market, the data still suggest that the quality of jobs held by the increasing numbers of women workers is lower than jobs held by their male counterparts.

The percentage of labor force employed in public administration has steadily decreased over the years, a trend which is expected to continue. This trend is probably beneficial to Guam's economy as the additional percentage of the labor force will be available to fuel the private sector further. Retail and wholesale trade has shown a steady increase, and is expected to keep the same trend in the years to come. Guam's transition to a commercial economy (compared to a public sector economy) is evident in the figures obtained in the 1980 census. Also, Guam's economy is steadily increasing its service-oriented industry base, and should tailor its education/training programs to prepare the labor force for such jobs. Furthermore, females on Guam have good potential to share an equal footing in Guam's employment opportunities. Although women still tend to lag in vertical mobility in certain industries, with careful encouragement this too should change in the future.

The median household income for Guam in 1979 was \$15,752, the median family income was \$16,203, and the median income of unrelated individuals was \$6,713. The Central region of Guam had the highest median incomes; the Southern region had the lowest. The mean incomes of households, families, and unrelated individuals were \$21,595, \$17,089 and 8,461, respectively. The Central and Southern regions again had the highest and lowest incomes, respectively. Wage and salary incomes were the highest of any type of income earned, and farm income was the lowest. Per capita income increased by 96 percent between 1969 and 1979, from \$3,936 in 1969 (in 1979 dollars) to \$4,793 in 1979. The per capita income of the U.S. for 1979 was \$7,298, a figure that is 52 percent higher than Guam's per capita income for the same period.

The number of housing units increased by 69 percent between 1970 and 1980, with most of this increase occurring in the North. The median number of rooms per housing unit has remained at about 5 for the past 3 censuses. There was an increase in the number of buildings that had 5 or more units, from 4 percent in 1970 to 16 percent in 1980, showing the increase in building of apartments. Most (over 99 percent) housing units were connected to the public water, sewer, and power systems; nearly 70 percent of homes had telephones in 1980. The median value of owner occupied homes increased from \$4,200 in 1960 to \$58,000 in 1980. The median contract rent asked for renter occupied units increased from \$76 in 1960 to \$196 in 1980.

**b) PRIORITY NEEDS/OBJECTIVES TO BE PURSUED OVER
THE NEXT FIVE (5) YEARS TO ADDRESS NEEDS
OF LOW INCOME FAMILIES AND PEOPLE
WITH SPECIAL NEEDS**

1. To encourage, promote, and/or seek to expand the supply of "affordable housing units and rental units and public housing supply for low income families. To preserve GHURA's limited housing inventory wherever possible unless replacements can be provided once homeowner initiatives are made to individual tenants. To identify, locate, and secure "developers" and/or "contractors" lenders who are willing and able to develop lower cost housing alternatives for low income families.
2. To promote and/or assist in the coordination and/or development of housing partnerships between federal and territorial agencies, private non-profit entities and corporations, banking and lending institutions and developers to pool housing resources, create and/or build affordable housing projects and/or facilitate opportunities for low income and moderate income families to obtain land, housing and/or make available lease/purchase arrangements and/or low interest loans for homes. To encourage developers, contractors, and/or the government to build, facilitate the financing and/or construction of multi-family units, congregate housing and rental units for low income and middle income families.
3. To assist non-profit entities and/or resident councils and groups, and government agencies in developing their skills for planning and/or applying for available federal grants and/or developing support services for low income families, handicapped individuals, homeless citizens and families aimed at improving or developing such individuals and families so that they can increase their potential and marketability for employment and ability to become homeowners or secure shelter. To help increase the opportunities for low income families to become entrepreneurs and/or service providers in day care, home care assistance, home cleaning, lawn cleaning, catering, landscaping, tourist and/or related activities or services. To help provide job training opportunities for low income residents and allow them to increase their equity stakes in homes and neighborhoods. To increase the supply of supportive housing/shelter and services so that persons with special needs, including the elderly can live with dignity and independence in decent, safe, and sanitary housing. To assist non-profit organizations, resident councils, units of governments, and/or groups of citizens with special needs in obtaining temporary and/or permanent housing for clients and/or individuals they serve and insure appropriate support services are combined with such endeavors by providing technical, planning and implementation assistance. To assist the above groups in applying for federal and local funding assistance. To develop and provide programs to help stabilize and preserve public housing projects by assisting residents in such neighborhoods to be a viable part of the island community and are "neighborhoods" which are decent, safe, sanitary, crime and drug free and wholesome environments for raising families. To provide and encourage appropriate recreational, social, educational, health, supportive and related leisure time activities in public housing areas which would enhance public housing residents' well being as neighborhoods.
4. To increase the availability of acceptable culturally sensitive, energy conscious, and lower cost housing and rental unit supply in the villages by encouraging the rehabilitation, repair, and or upgrading of tin-roofing homes with concrete and/or wooden structures or substandard concrete homes. To preserve the supply of such homes and "public housing" structures within the Territory for low income families.

5. To promote policies and/or advocate for an increase in the housing subsidy provided families for rental.
6. To promote the building of energy conscious and efficient housing and energy efficient appliances and equipment in housing development projects affecting low income families. To advocate the use and/or establishment of "lifeline" rates for low income families for water, power, and gas. To promote such things as the building of water catchment and solar heat systems and typhoon proof modular, or foam paneled houses, or new low cost material technology.
7. To promote and/or encourage local/federal support for infrastructure developments in areas designated for the landless and low income families.
8. To promote the long-term rental of government land for the low income rather than the sale of government land so as to conserve our limited supply for future generations.
9. To promote and/or assist the community in becoming more aware about housing problems, innovative concepts and/or strategies directed at increasing housing developments within the territory and in understanding the housing crisis or situation on Guam affecting low, moderate and middle income families.
10. To repair and/or modernize certain housing units in GHURA's low cost housing areas and projects through the use of still available prior year CIAP FY91 and 92 funds. Future Comprehensive Assistance Grant monies will be used for physical improvements and management initiatives geared at steadily upgrading our handling of our public housing projects.
11. To promote and/or encourage the formal review and/or analysis of regulation, zoning laws, development policies, tax laws and or environmental policies and/or laws which increase the cost of housing, and/or serve as barriers to affordable housing. To reduce red tape, delays, and/or unnecessary clearance and costs associated with the home building and home rental; permitting, inspection and licensing process. To promote the removal of unnecessary barriers wherever possible with respect to home building and housing rental processing.

PART 1

2. HOMELESS ASSISTANCE NEEDS AND STRATEGY

2. HOMELESS ASSISTANCE NEEDS

This is a description of the nature and extent of homelessness within the jurisdiction, their estimated number and special needs of the mentally ill, alcohol and drug abusers, runaway or abandoned youth and victims of domestic violence.

Guam within the past six years is starting to develop a pattern of homelessness similar to the overall U.S. continent situation though the numbers are small compared to what is found in cities nationwide. Additionally, the homeless are not living in slum dwellings and sites like is found in some cities nationwide and in so called abject poverty conditions.

Guam's "street" or "homeless" individuals are living primarily in Agana close to the Agana Boat harbor area in the parks, pavilions, and beach areas surrounding the public market area and Padre Palomo park. Approximately 20 people can be seen sleeping and or roaming this area nightly.

There is a temporary shelter area, a two story, partly wooden/cement house called Guma San Francisco, in Agana which is used to provide emergency shelter and serve as a feeding facility at night which is manned by volunteers from different districts and with the program managed by the St. Vincent De Paul Society.

The other facilities (houses) for the homeless are operated by the Catholic Social Services who operate facilities in the villages of Tamuning, Agana, and Dededo, Catholic Social Services offers temporary shelter for homeless individuals, not quite like Guma San Francisco which is more like a drop in center of over night sleeping service and a food kitchen. Catholic Social Services provides "housing shelters" for abused adults and their children. They also provide housing and support assistance to families; some with children and other adults, elderly, handicapped and individuals without homes. This is a slightly different clientele from Guma San Francisco. Most of the homeless families and individuals appear to be recent immigrants from Micronesia who are here in search of jobs usually in hotels, restaurants, and retail outlets and markets, as security guards, construction helpers and/or laborers or assistants and typists/receptionists in other firms or companies.

The Guma San Francisco facility has a bed sleeping capacity of 27 beds though 408 homeless individuals slept there between October 11, 1990 to October 29, 1991. The facility provides an average of 30 to 35 meals daily. The facility is not ordinarily designed or used as a regular sleeping accommodation for a large number of people.

Our strategy with respect to the "homeless" and other populations with special needs are basically as follows:

1. To assist the organizations presently providing such shelters and services in identifying appropriate and more stable long term sources of funding for their programs and in securing appropriate support services for the clients served by the above groups from the government and/or assisting these entities by strengthening their planning and grants writing skills so they can apply for available grant funding.
2. To assist these groups in identifying possible sources of funding for temporary and long term shelters.
3. To assist these organizations in identifying and securing appropriate support services funding and in establishing other unmet needs of special populations.

4. To assist these organizations in developing a data base for documenting their needs and in advocating support for their program needs and in further improving their volunteer support, management organization and in developing their staff's organizational skills.

There is about twenty (20) individuals who can be categorized as "street" people or individuals. These are individuals roaming the streets daily who are without support services. Some appear to be in need of mental health and/or alcohol abuse services and/or counseling or therapy.

Catholic Social Services presently deals with a present case load of 157 families (both parents) with children, 66 single parents with minor children, 10 couples without children and 8 handicapped individuals and 19 elderly.

According to the Office of Aging, Department of Public Health and Social Services, there are probably about 200 elderly who need housing and an additional 60 who desperately need housing, solo or congregate. About 4 percent of the total 1990 population is considered "elderly". In the 1990 census, about 5,230 people are between age 65 to 85 and over. There are 3,527 people age 60 to 64 in 1990.

The Department of Mental Health and Substance Abuse reports, there may be 14 mentally ill persons, 5 persons with alcohol abuse, 2 victims of domestic violence and 5 mentally retarded individuals having special needs which includes housing. Other reports indicate 51 mentally ill need shelter and 45 developmentally disabled need housing.

Sanctuary, a non-profit entity assisting runaway and abused youths, needs permanent and transitional housing for an estimated 344 youths who needed temporary housing and/or longer term housing, counseling and support assistance. They have three facilities with a bed capacity of 35. Clients served are ages 12 to 18. They provide counseling, meals, related support services including transportation.

Guma Mami, a non-profit entity, which has encountered serious funding support over the recent years has a clientele of 13 individuals who are adults, mentally retarded, in independent living environments. They are currently receiving some funding support like Sanctuary from the Government of Guam to continue providing housing and related human services to their clients. They have two houses, one for 4 persons in Toto and 7 persons in a Mangilao house. Guma Mami provides counseling, meals and related support services.

The Department of Vocational Rehabilitation and Goodwill Industries and the Disabilities Council also have reported a need for clients who have shelter and support services needs. Some of the support services are presently provided under their current programs but there are a few who fall through the gaps and whose needs are not presently being met.

Catholic Social Services also administers the Alee Shelter for physically abused spouses. During 1991, 238 individuals have received services under the program.

All in all Guam's identifiable "homeless" population and those with special shelter needs appears to be slightly less than 2,000 individuals of reports received from the various human services agencies and organizations which includes the Red Cross, the Department of Youth Affairs, Guma Man Hoben, Department of Mental Health and Guma Mami.

There are over 100 cases of aggravated assaults reported to the Police department annually. There are about 1200 cases of simple assaults annually, and about 20 sex offenses, 30-60 offenses committed against family and children, about 600 cases of driving under the influence of liquor or public drunkenness, over

On Guam the problem of homelessness is not new but because Guam is a tight family community which places a high value on family cohesiveness, homelessness was never a big issue. Family and friends can always be dependent upon for assistance. However, as the island progressed and as other cultures and ideas were introduced into the island, the problem has compounded itself even further. The cost of living on Guam is tremendously high making it difficult for low and middle income families to survive. Added to this, Guam's housing sector experienced an unparalleled housing boom making it difficult for low and middle income households to build decent, affordable and safe structures for their families.

The numerous natural disasters that plagued the island over the past several years have caused our homeless problem to increase. With the advent of Super Typhoon Omar, hundred of people were displaced from their homes due to severe damages sustained, not to mention the loss of income due to unemployment from businesses who were affected the most. Although the island is equipped to handle emergencies of this nature, the extent and magnitude of the damages far exceeded the capabilities of the island and that of the government. Appropriate housing and suitable accommodations were below the level of individuals and families needing shelter. Although affordable housing through FEMA enabled families to rebuild their homes, several hundreds still remained without the means to adjust and begin rebuilding their lives.

Recently, the problem has been compounded further by the displacement of people living on agricultural leased lots. Suitable and available housing again is sorely needed to accommodate the numbers of people affected.

COURSE OF ACTION: [EXPALIN FURHTER]

- Creation of an Advisory Council ^{or Task Force} composed of the Government agencies involved with the Homeless and Non-profit organizations.

- This Council will be tasked with the responsibility of ~~addressing the issue and~~ ^{up the funds} recommend appropriate courses of action to pursue ~~to combat~~ the situation. The Council will also be responsible for overseeing the creation of a centralized body to coordinate Homeless requirements with the departments and organizations involved.

- Development of Centralized Agency tasked with the Responsibility of Coordinating Homeless Requirements and Needs to the Various Support Agencies/Departments and Non-profit Organizations

- Numerous government agencies are mandated to provide services to the homeless. Several non-profit organizations are also chartered to provide exclusive service to the homeless. Although services and programs are offered, each entity has its own responsibility encompassing the different segments of the population in need. Thus, because of the different agencies and organizations involved, the current practice of providing to the homeless is fragmented. An overall, centralized body must be established who will develop a strategy for the island to deal with the issue of homelessness.

- Development of a Comprehensive Affordable Housing Strategy

an overall comprehensive strategy for the

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- One area that this body should be tasked with is the development of a Comprehensive Affordable Housing Strategy. This strategy will provide for a complete study on the islands future housing requirements and the process on how to provide affordable housing programs. A plan of this nature is especially needed during times of emergency crisis when hundreds of people are displaced. Guam Housing and Renewal Authority or Guam Housing Corporation may have some existing plan in the market

however all provide a segment that
deals w/ the homeless (progress)
but none state how
the island or authority
is to address the issue.

1,600 cases of disorderly conduct, over 210 cases of "runaways" and beyond control and about 1500 cases of vandalism annually. Cases involving domestic violence, drunkenness and abused children and spouses appear to be on the rise within the recent years. It is not clear whether some of this might be resulting from more public awareness about the subject of "abuse". Many of the offenders involved in "drunkenness" and driving under the influence appear to be "islanders".

The Western Pacific Association for the Disabled provides transportation and socialization activities for members. There is also a Guam Association for the Deaf, a Parents Agency Networking Organization, a Down's Syndrome Association and an American Heart Association.

The Marianas Association for Retarded Persons provides limited education/legal assistance services, case management and employment assistance for clients the organization serves.

All in all, all the above organizations appear to have a need for housing for about 420 persons or individuals on a stable year round basis.

Other People in Population with Special Needs:

People with Aids:

There are 12 persons ill with AIDs and 30 persons infected with HIV. It is not known presently how these people handle their housing needs, but it is most likely that as their disease progresses, they may end up needing financial and housing assistance. No reports have been received regarding their needs as yet however.

Frail Elderly:

We do not have any of the number of frail elderly in the population and what their support services needs might be. If we estimate that 10% of the elderly are frail, which is an accepted norm then we have an estimated 523 frail elderly on Guam.

People under the Self Sufficiency Program -

There are AFDC mothers who are enrolled by the Department of Public Health and Social Services in employment and training programs. There are about 50-75 clients served through the JOBS program which is a cooperative networking of Department of PH&SS, AHRD, GCC, Dept. of Labor, GHURA, DOE, Headstart to assist such people with jobs, job training and related assistance including housing and child care.

Table 1B & 1C
CHAS Tables 1B & 1C

U.S. Department of Housing and Urban Development
Office of Community Planning and Development

Homeless Population

Comprehensive Housing Affordability Strategy (CHAS)

Name of Jurisdiction (3) or Consortium:			Five Year Period:(enter fiscal year) FY: through FY:		
Table 1B Total	Category	Total (A)	Sheltered (B)	Unsheltered (C)	
	1. Number of Families				
	2. Number of Persons in Families				
	3. Number of Individuals not in Families				
	4. Total Persons/Individuals (Lines 2 + 3)				
Table 1C Special Needs	Category	Number of Families*		Number of Individuals	
		Sheltered (A)	Unsheltered (B)	Sheltered (C)	Unsheltered (D)
	1. Mentally Ill				
	2. Drug Abuse				
	3. Alcohol Abuse				
	4. Victims of Domestic Violence				
	5. Runaway/Abandoned Youth				
	6. Other (specify)				

* Include families with head of household or spouse having the characteristics listed.

) Table 1D - Other Special Needs Population
CHAS Table 1D (Optional)

U.S. Department of Housing and Urban Development
Office of Community Planning and Development

Other Special Needs Population

Comprehensive Housing Affordability Strategy (CHAS)

Name of Jurisdiction(s) Consortium: Guam Housing and Urban Renewal Authority - Territory of Guam			Five Year Period:(enter fiscal years) FY: through FY:	
Category	Households			
	People with Disabilities (A)	Elderly with Special Needs (B)	Persons with AIDS (C)	Participants in Economic Independence and Self Sufficiency Programs (D)
1. Number of Households			1/3***	
2. Supportive Housing Need		260**	N/A	
3. Service Needs		523*	N/A	
4. Supportive Service Need Identified in FSS Plan				

* frail elderly estimate. Frail elderly is generally estimated to be about 10% of the total elderly, (age 65 and over) population.

** estimated current estimates based on report.

N/A = Not Applicable

*** 11 with diagnosis of aids and 30 infected with HIV.

PART 1

3. OVERALL DESCRIPTION OF GUAM'S POPULATION

a) GEOGRAPHIC DISTRIBUTION OF POPULATION

Guam, an unincorporated territory of the United States, is the largest, most populated, and Southern-most island in the Marianas archipelago. The island is 30 miles long and 8 miles wide, with a total land area of 209 square miles. The island was formed through an uplift of undersea volcanic activity and is surrounded by coral reefs near the shore. Guam is composed of two (2) distinct geological areas of about equal size: the Northern part of the island is a high coralline limestone plateau rising up to 850 feet above sea level and contains the water lens which is the main source of fresh water on Guam; the Southern region is mountainous. Apra Harbor, one of the largest protected harbors in the Pacific, is located on the central, western side of the island.

Guam became a possession of the United States after the Spanish-American War in 1898, and for the next 40 years remained almost unaffected by the changes occurring in the outside world. Health measures instituted by the U. S. naval government started a rapid population growth, and between 1898 and 1940 the island's population more than doubled, from 10,000 to more than 22,000. Because of the occupational of Guam by Japanese armed forces during World War II, after the war more attention was paid to the territory. In 1950, Guam became an unincorporated territory of the United States by the Organic Act. Chamorro residents became United States citizens and the Government of Guam was set up with a Legislative Branch elected by Guamanians and an Executive Branch appointed by the President of the United States and directly responsible to the Department of Interior. In 1970, Guam elected its own governor for the first time. Guam is divided into 19 election districts.

SPANISH PERIOD

Although Guam had been inhabited for more than 3, 500 years, it was not officially "discovered" until Magellan came in 1521. Spanish missionaries and administrators came and went over the next three hundred years. Contact during the first two centuries was sporadic, although documented (see Underwood 1973 for recorded contacts). No complete census was taken during this period.

Following a long period of native unrest, Don Jose Quiroga arrived in 1680 on Guam and his men "attacked and destroyed native villages and founded 6 "church-villages" of Pago, Inapsan, Inarajan, Merizo, Umatac, and Agat, and forced the natives to move into one of these centers" (Underwood 1973, cites Fritz 1904; Corte 1897). Also, Quiroga pursued the natives who fled to Rota after burning the church at Inarajan. Some 150 fugitives were returned to Guam. (Corte 1870, Ibanez 1886).

After 1694, when Quiroga became Governor, the inhabitants of all the Mariana Island were moved to Guam or Saipan, except for a few natives who hid out on Rota to escape resettlement. Natives of Tinian Island were finally defeated on Agrigan and moved to Saipan in 1695. A final resettlement took place when Chamorros residing on Saipan were removed to Guam in 1698, leaving only Guam and Rota occupied at the beginning of the 18th century (Underwood, 1973:17, cites Safford, 1901, 1903; Corte, 1870, Fritz 1904).

The geographic distribution of Guam's inhabitants has been transformed since pre-contact times, when the Chamorro population lived in small hamlets located both along the coast and in the interior. Early historical accounts relate that along the coast, these hamlets consisted of approximately 50 to 150 huts, while the Interior hamlets were smaller, of from 6 to 20 huts (Carano and Sanchez, 1964). By 1681, the Spanish-Chamorro wars had resulted in the destruction of the smaller villages and the forced relocation

of the native people into a few large villages, where the spanish could control the population.

The Spanish established the government in Agana because of its long history as the political and cultural center of Guam. In order to facilitate the affairs of government outside Agana, Spanish authorities divided Guam into municipalities. Each municipality consisted of several villages or pueblos and was under the charge of a native magistrate called a "gobernadorcillo" ("little governor"). This system of municipal government continued under the American authorities after 1898. The gobernadorcillo was renamed as commissioner, and a deputy commissioner position was instituted to assist the commissioner.

Municipalities thus became the primary divisions of Guam for census reporting. By the 1920 Census, Guam had 8 separate municipalities. These municipalities were Agana, Asan, Piti, Sumay, Yona, Agat, Inarajan and Merizo. U.S. naval station personnel were not counted as residents of Guam, but were included in the continental United States. The 1920 census report shows population data for each municipality and for rural sections outside of Agana City.

The reporting of 1930 census data was similar to that of 1920 except that, in 1930, persons on naval reservations, including U.S. ships stationed on Guam, were counted as residents of Guam. These results were not included in the population of any municipality, but were compiled separately. A greater portion of this naval population should, according to the 1930 census report, have been assigned to the city of Agana, but the exact location of these reservations could not be determined from the information given by the enumerators on the census schedules.

Substantial reorganization of the municipalities occurred in 1930 in preparation for Guam's first elected Congress and first elected commissioner system. Executive Order 53 set forth the divisions of the old municipality of Agana into the municipalities of Agana, Barrigada, Dededo, and Yigo, and further subdivided the municipality of Barrigada into Barrigada and Sinajana districts, and Dededo into Dededo and Machanao districts. In addition, Merizo was subdivided into merizo and Umatac districts, and Inarajan was subdivided into Inarajan and Talofofo districts. Reorganization thus created 7 new municipalities and districts for a total of 15.

The Second Guam Congress was the first elected Congress in the Territory, with the population counts of the 1930 census used for apportionment.

The 1940 census presented total counts for all 15 municipalities and districts, as well as for over 100 towns, barrios and districts within the municipalities. Military personnel were included within the municipality, district, or town where the military facility was located, and U.S. naval ships were listed separately as a portion of Sumay. During World War II, most of the towns and cities (including Agana city) were totally destroyed or severely damaged. In the reconstruction process, many of the communities were relocated and the division of municipalities into barrios was abandoned. There was also some reorganization of the municipalities of Agana and Sinajana in 1947, as part of Agana was annexed to Sinajana.

The 1950 census reported data for the 15 municipalities existing in 1940 and for 20 villages or cities existing as minor subdivisions within the municipalities. For the first time, census reports made no mention of the presence of military quarters, even though Guam's population had more than doubled between 1940 and 1950, almost exclusively as the result of post-war military activities.

One of the provisions of the Organic Act of 1950 caused the organization, authority, and responsibilities of the commissioner system to continue to follow the pattern outlined in guam Congress Bill No. 16, passed in 1948. However, between 1950 and 1960, Guam's municipalities again underwent extensive

reorganization. A local law was enacted to establish the election district boundaries for the purpose of electing the district commissioners, creating six new districts and eliminating two.

The 1960 census results were for 19 election districts. These districts included the six newly created municipalities of Tamuning, Mongmong-Toto-Maite, Mangilao, Chalan Pago-Ordot, Agana Heights, and Santa Rita. Because Sumay and Machanao were claimed by the military and ceased to require elected representation by commissioner, they were incorporated into the boundaries of other districts. Sumay was annexed into Santa Rita, and Machanao into Dededo and Yigo. 1970 and 1980 election district boundaries remained the same as the boundaries used in 1960, so census data for those three periods are comparable.

(1) POPULATION DISTRIBUTION BY BROAD GEOGRAPHIC AREA

Although election district boundaries have been altered considerably between 1920 to 1980, the broad areas of Northern, Central, and Southern Guam have remained intact (See Figures 1.3 through 1.8). For the purpose of data analysis, comparability by geographic area over time can be maintained between 1940 and 1980 within these three broad areas. The major disadvantage to this system is the inclusion in the South of the district of Santa Rita, which contains a single large government quarters area that distorts some of the data. Beginning with 1960, the North consisted of Dededo, Tamuning and Yigo. Central Guam consisted of Agana, Agana Heights, Asan, Barrigada, Chalan Pago/Ordot, Mangilao, Mongmong-Toto-Maite, Piti and Sinajana. The South was composed of Agat, Inarajan, Merizo, Santa Rita, Talofofo, Umatac and Yona.

Prior to World War II, 63 percent of the population was concentrated in Central Guam, primarily in the capital city of Agana; 29 percent lived in the South; and only 8 percent resided in the North. While population increases occurred in each of the three regions between 1940 and 1980, the vast majority of the growth took place in the Northern portion of the island (Table 1.10).

Table 1.10 Distribution by Region on Guam: 1940 to 1980

Region	Numbers					Percent				
	1980	1970	1960	1950	1940	1980	1970	1960	1950	1940
Total	105,979	84,996	67,044	59,498	22,290	100.0	100.0	100.0	100.0	100.0
North	47,583	32,540	18,752	16,147	1,795	44.9	38.3	28.0	27.1	8.1
Central	34,526	31,266	25,479	26,495	13,946	32.6	36.8	38.0	44.5	62.6
South	23,870	21,190	22,813	16,856	6,549	22.5	24.9	34.0	28.3	29.4

Note: See text for inclusion of election districts in regions.

SOURCE: U.S. Bureau of the Census Decennial Reports.

The proportion of persons living in the North increased steadily from 8 percent in 1940 to 45 percent in 1980, with the Northern population growing by 45,788 persons over the 40 year period. Central Guam showed substantial and steady population growth during the same period, increasing by 20,580 persons; however, the proportion of the population living there declined from 63 percent to 33 percent. In contrast, Guam's Southern area did not show steady growth during the same period. The population of the South grew by 16,264 persons between 1940 and 1960, declined by 1,623 persons during the 1960s, and recovered 2,680 persons during the 1970s. By 1980, the proportion of persons residing in the South

dropped to 23 percent.

One of the causes for these changes in population distribution was the occupation of the island by the Japanese armed forces during World War II and the continued presence of the United States military after Guam's recapture. World War II had a profound impact on the relocation of the civilian population out of established communities and into areas that were either more convenient to the occupying forces or that were safer for the inhabitants. War activities caused certain villages to cease to be inhabited by civilians, including most of Macanao in the North and Sumay in the South. The village of Agana in Central Guam became nearly deserted.

Another cause for the changes in population distribution was Guam's increased strategic value to the United States during the following World War II. In 1944, Guam became the only location in the Western Pacific large enough to hold major U.S. military bases and to be completely under American control when the Philippines gained independence from the United States. As a result, the Navy and Air Force built large military installations on Guam, seizing over one-third of the island's land and water in the process.

Military personnel and their dependents were concentrated into densely settled areas on and near bases, which were primarily in the Northern and Central portions of the island, without regard to the location of established local communities. Because base areas and government quarters areas were targeted by the military government for the development of infrastructure, and also because civil service jobs on bases were available to the civilian community, the Northern and Central portions of the island attracted migration by the resident population and new residents.

The location of military facilities was determined largely by Guam's geography. The flat limestone plateau of the North became the location of Andersen Air Force Base; Guam's natural deep water port became the center of regional Naval activities; and an airport site in Central Guam already under construction by the Japanese became the Naval Air Station and the civilian air terminal. Southern Guam, with its steep central spine of mountains, was unsuitable for most military activities other than a Naval magazine and watershed. These remain vast, but underdeveloped, holdings.

(2) POPULATION DISTRIBUTION BY ELECTION DISTRICT

There were considerable variations in population growth between the individual election districts of Guam within the regions. Although the total population of the island increased by almost 25 percent between 1970 and 1980, 3 districts more than doubled in population, while several others lost population. Table 1.11 shows growth of each election district from 1960 to 1980. As mentioned earlier, major changes in election district boundaries between 1930 and 1940 and between 1950 and 1960 make district analysis for those decades impossible.

Table 1.11 Population by Region and Election District: 1960 to 1980

Region Election District	Percent			Percent Change			70-80	60-80
	1980	1970	1960	1980	1970	1960		
Total	105,979	84,996	67,044	100.0	100.0	100.0	24.7	58.1
North	47,583	32,540	18,752	44.9	38.3	28.0	46.2	153.7
Dededo	23,644	10,780	5,126	22.3	12.7	7.6	119.3	361.3
Tamuning	13,580	10,218	5,944	12.8	12.0	8.9	32.9	128.5
Yigo	10,359	11,542	7,682	9.8	13.6	11.5	-10.2	34.8
Central	34,526	31,266	25,479	32.6	36.8	38.0	10.4	35.5
Agana	896	2,119	1,642	.8	2.5	2.4	-57.7	-45.4
Agana Hts.	3,284	3,156	3,210	3.1	3.7	4.8	4.1	2.3
Asan	2,034	2,629	3,053	1.9	3.1	4.6	-22.6	-33.4
Barrigada	7,756	6,356	5,430	7.3	7.5	8.1	22.0	42.8
Chalan Pago/ Ordot	3,120	2,931	1,835	2.9	3.4	2.7	6.4	70.0
Mangilao	6,840	3,228	1,965	6.5	3.8	2.9	111.9	248.1
Mongmong- Toto-Maite	5,245	6,057	3,015	4.9	7.1	4.5	-13.4	74.0
Piti	2,866	1,284	1,467	2.7	1.5	2.2	123.2	95.4
Sinajana	2,485	3,506	3,862	2.3	4.1	5.8	-29.1	-35.7
South	23,870	21,190	22,813	22.5	24.9	34.0	12.6	4.6
Agat	3,999	4,308	3,107	3.8	5.1	4.6	-7.2	28.7
Inarajan	2,059	1,897	1,730	1.9	2.2	2.6	8.5	19.0
Merizo	1,663	1,529	1,398	1.6	1.8	2.1	8.8	19.0
Santa Rita	9,183	8,109	12,126	8.7	9.5	18.1	13.2	-24.3
Talofofo	2,006	1,935	1,352	1.9	2.3	2.0	3.7	48.4
Umatac	732	813	744	.7	1.0	1.1	-10.0	-1.6
Yona	4,228	2,599	2,356	4.0	3.1	3.5	62.7	79.5

SOURCE: U.S. Bureau of the Census Decennial Reports.

The villages with the greatest increases in population between 1970 and 1980 were Dededo, Piti, and Mangilao, and those showing decreases were Yigo, Agana, Asan, Mongmong-Toto-Maite, Sinajana, Agat, and Umatac. There were many factors influencing these variations in population growth, although war and post-war activities were especially significant.

The village of Agana has traditionally been Guam's most important community, possessing a rich history dating back to the pre-contact era (Sanchez, 1979:9). Its chiefs were the most respected in the Marianas in pre-contact Guam. The Spanish recognized this and established the seat of government at Agana. The U.S. Navy continued to use Agana as its administrative center when it began its administration of the island.

The Japanese occupied Guam from December 10, 1941 until July 1944. Agana was used as their seat of government and their military headquarters; however, forced relocation of the population left the city virtually deserted, with no more than 200 families. The recapture of the island in 1944 was preceded by American bombardment from shipboard artillery for 13 consecutive days prior to Guam's recapture, totally destroying the city.

After Guam's recapture, U.S. military and civilian authorities decided to reestablish the government in Agana. because of the massive destruction of the city during Guam's recapture, the military government literally bulldozed the remains of the city into the sea, creating a new peninsula of land, and coliterating all remaining streets and property boundary markers.

A new system of streets was laid out in Agana, using a different method of surveying from the Spanish system previously used. Later, in the 1950's, the Government of Guam superimposed still another survey methodology on top of the other two. This resulted in a "fractional lot" problem in Agana that is still being resolved in the 1980's. The depopulation of the city during the war and unresolved property disputes after the war caused the number of persons living in Agana to decline from 10,004 persons in 1940 to just 800 persons in 1950. A portion of its pre-war population was regained by 1970, but the population declined from 2,119 to 896 persons between 1970 and 1980.

The most dramatic growth occurred in the Northern district of Dededo, growth which began shortly after the liberation in 1944. From a total population of 5,126 in 1960, Dededo's population increased by more than 360 percent during the next 20 years, reaching 23,644 persons in 1980. This striking increase was fueled by in-migration of Filipinos, Micronesians, Statesiders and other non-indigenous people. Private residential and apartment construction, as well as business construction, flourished in the area, making it the largest and fastest growing district in the Territory.

The Central, coastal village of Piti experienced the largest percent population increase (123 percent) of any district between 1970 and 1980. However, growth in the civilian, non-federal lands was 230 persons, or 18 percent between 1970 and 1980. Piti contains part of Apra Harbor, which has been under U.S. Navy control since Guam became a U.S. possession. It was the homeporting of a Navy ship in Apra Harbor between 1970 and 1980, housing 1,352 military personnel, that caused the population of the Piti to double between 1970 and 1980.

The Northern district of Yigo showed population growth during the 1960's but declined by 10 percent between 1970 and 1980. After most of Machanao's land area became occupied by Andersen Air Force Base immediately after World War II, Machanao was annexed to Yigo. The fluctuations in Yigo's population between 1960 and 1980 have been partially the result of changes in the number of persons living on the base and in government quarters near the base. The beginning and ending of the Vietnam Conflict, a war in which Guam's Air Force personnel played a major role, contributed to the growth of the population in Yigo during the 1960's, and the decreased population during the 1970's. The civilian-held portion of Yigo actually grew in population by 90 percent (2,506 persons) between 1970 and 1980, while the population on federal lands decreased by 42 percent.

The Central district of Asan was another area losing population between 1960 and 1980, declining by 33 percent during the period. In the late 1970s, continuing into the 1980s, Asan upgraded and modernized its infrastructure and public utilities under a federally-supported community redevelopment program. Delays to the urban renewal project caused by archaeological findings and funding problems left the project incomplete prior to the 1980 census. In addition to this, part of Asan was designated as a U.S. War in the Pacific National Park. The limited land area left for redevelopment has contributed to the decline in population.

The district of Mongmong-Toto-Maite in Central Guam is comprised of three distinct communities. It was established as a single district in 1946. The number of persons living there shrank by 13 percent between 1970 and 1980 solely because of a decline of over 1,600 persons living on federal lands in the community of Mongmong, representing the closure of a Naval Air Station barracks. The civilian, residential portion of the district grew by slightly more than 800 persons, or almost 20 percent.

The population of the Central district of Sinajana decreased by 36 percent between 1960 and 1980. The municipality was first organized in 1930. Following World War II, the population of Sinajana grew tremendously with the construction of some 400 new homes. Population growth continued until the housing in the area became saturated, reaching 3,862 persons by 1960. Sinajana was the first district to be completely upgraded and modernized under a Federal renewal program in the mid 1970s. The urban renewal project resulted in the relocation of some residents to other areas of the island and the elimination of substandard housing lots. The decline in population between 1960 and 1980 is therefore not likely to continue into the future.

Among the Southern districts, Santa Rita contained the greatest number of persons in 1970 and in 1980. More than 63 percent of its population resided in Navy quarters in 1980, however. Most growth in the South between 1970 and 1980 occurred in Yona, where the majority of commercial and residential housing developments were constructed during the decade. The districts of Agat and Umatac decreased in population. Agat contained no military populations and no obvious development constraints; however, it may be that the district experienced out-migration by the local resident population, while lacking major housing subdivision development to attract new residents. The situation in Umatac has been compounded by the lack of infrastructure development to support new housing subdivisions.

(3) POPULATION ON FEDERALLY OWNED LANDS

The federal government owned and controlled one-third of Guam's land area in 1980, which has not changed since the end of World War II. Military housing on those areas developed independently of the local economy. Defense requirements, the construction of government quarters in new areas, opening or closing of military barracks, and the decision to homeport U.S. Navy ships on Guam are factors that have determined the number and location of active duty military personnel and their dependents, rather than economic conditions and other factors influencing the number and distribution of the civilian population. Census data are available for the population on federal lands for 1970 and 1980, as shown in Table 1.13. The 1960 census gives data on persons living in housing units on federal lands; however, those living in group quarters are not reported for federal lands.

Table 1.13 Population Distribution by Non-Federal/Federal Land Status and by Urban Designation: 1970 and 1980

Region Election District	1980			1970		
	Total Persons	Persons in Federal Lands	Percent in Federal Lands	Total Persons	Persons in Federal Lands	Percent in Federal Lands
Total	105979	19550	18.4	84996	20316	23.9
Urban	41875	14063	33.6	21671	0	0
Percent	39.5	71.9	...	25.5	0	...
North	47583	8699	44.5	32540	10688	52.6
Urban	23208	8430	43.1	8230	0	0
Dededo	23644	3554	18.2	10780	1697	8.4
Tamuning	13580	69	.4	10218	235	1.2
Yigo	10359	5076	26	11542	8756	43.1
Central	34526	5065	25.9	31266	4085	20.1
Urban	10126	0	0	10829	0	0
Agana	896	0	0	2119	0	0
Agana Heights	3284	314	1.6	3156	419	2.1
Asan	2034	417	2.1	2629	535	2.6
Barrigada	7756	1716	8.8	6356	1105	5.4
Chalan Pago-Ordot	3120	0	0	2931	0	0
Mangilao	6840	856	4.4	3228	0	0
Mongmong-Toto-Maite	5245	410	2.1	6057	2026	10
Piti	2866	1352	6.9	1284	0	0
Sinajana	2485	0	0	3506	0	0
South	23870	5786	29.6	21190	5543	27.3
Urban	8541	5633	28.8	2612	0	0
Agat	3999	0	0	4308	38	.2
Inarajan	2059	0	0	1897	0	0
Merizo	1663	0	0	1529	0	0
Santa Rita	9183	5786	29.6	8109	5505	27.1
Talofofo	2006	0	0	1935	0	0
Umatac	732	0	0	813	0	0
Yona	4228	0	0	2599	0	0

SOURCE: U.S. Bureau of the Census PC80-1-B54 Table 4; PC(1)B54 Table 4.

Table 1.13 shows that in 1970, 24 percent of the total population of Guam (20,316 persons) lived on federal land areas. Nearly 53 percent of these lived in the North, mostly on Andersen Air Force Base; 20 percent in the Central region, mostly at the Naval Air Station and Naval Regional Medical Center; and 27 percent lived in the South, in Apra Harbor housing. By 1980, the smaller number of persons on federal lands and growth in the civilian population caused the percent of persons living on federal lands to decrease to 18 percent. A larger share resided in Central Guam because of a naval vessel berthed in Piti.

Future military population living in federal land areas will be determined by the Defense Department. The 1990 census will probably see some shift in the geographic distribution of the population to Central Guam caused by the homeporting of additional ships in Apra Harbor since 1980. The local names of federal land areas are show in Table 1.14.

Table 1.14 Population on Federal Lands: 1980

Region Election District, Federal Land Area	Persons	Percent Of Total	Percent Federal
Total persons	105979	100	...
Persons on federal land areas	19550	18.4	100
North	8699	8.2	44.5
Dededo, Naval Communication Station	3538	3.3	18.1
Dededo, Andersen Air Force Base Northwest Field	16	0	.1
Tamuning, Harmon Annex	69	.1	.4
Yigo, Andersen Air Force Base	4892	4.6	25
Yigo, Marbo Annex	184	.2	.9
Central	5065	4.8	25.9
Agana Heights, Naval Hospital	314	.3	1.6
Asan, U.S. Naval Hospital	417	.4	2.1
Barrigada, Naval Air Station	1650	1.6	8.4
Barrigada, Naval Communication Station	66	.1	.3
Mangilao, Marbo Annex	856	.8	4.4
Mongmong-Toto-Maite, Naval Air Station	410	.4	2.1
Piti, Vessel	1352	1.3	6.9
South	5786	5.5	29.6
Santa Rita, Apra Harbor Naval Reservation	5633	5.3	28.8
Santa Rita, U.S. Naval Magazine	153	.1	.8

SOURCE: U.S. Bureau of the Census Summary Tape File 1A, Table 1; Bureau of Planning, Government of Guam.

(4) POPULATION DENSITY

Guam's island wide population density increased over 368 percent between 1940 and 1980, from 107 persons per square mile in 1940 to 507 persons per square mile in 1980, as shown in Table 1.15. Increases in density were not uniform throughout the island. The Northern portion of the island was the most populated region by 1980, but it was still not the most densely settled. Its density increased from 25 persons per square mile in 1940 to 670 in 1980. The Central region was the area with the highest population density on the island, increasing from 324 to 803 persons per square mile by 1980. At one time, the Southern section of the island was more densely settled than the North, but by 1980, it had the lowest population density, only 251 persons per square mile. Density in the South increased rapidly between 1960 and 1980, reflecting the slower rate of growth in the South during the period of rapid growth in the North.

Table 1.15 Population Distribution and Density by Region 1940 to 1980

Region	Year					Pcnt Change 1940-80
	1980	1970	1960	1950	1940	
Total population . . .	105979	84996	67044	59498	22290	373.8
Area in square miles . . .	209	209	209	209	209	
Population density	507	407	321	285	107	
North Population . .	47583	32540	18752	16147	1795	2580
Area in square miles . . .	71	71	71	71	71	
Population density	670	458	264	227	25	
Central Population . .	34526	31266	25479	26495	13946	147.8
Area in square miles	43	43	43	43	43	
Population density	803	727	593	616	324	
South Population . .	23870	21190	22813	16856	6549	263.8
Area in square miles	95	95	95	95	95	
Population density	251	223	240	177	69	

Note: 1980 population in Central Guam includes 1352 persons living on board military vessels.
 SOURCE: U.S. Bureau of the Census PC80-1-A54 1980 Table 4; PC(1)-B54 1970 Table 5; P-B54 1950 Table 34, Bureau of Planning, Government of Guam.

(5) URBAN-RURAL DISTRIBUTION

In order to qualify as urban, an area must first meet the criteria of Census Designated Place (CDP). As discussed earlier, a CDP is a generally closely settled center of population without corporate limits. If the CDP has a population of at least 2,500 persons, it is urban. Rural areas are all areas that are not urban.

Although Places have been named by the Census Bureau since 1960, a comparison of urban-rural distribution is not possible. Census definitions of CDP's have not been applied consistently on Guam for each census period. In 1960 and 1970, 16 CDP's were named. In 1980, an additional 16 CDP's were listed (Table 1.16). Many of those CDP's additionally named in 1980 were existing communities in 1970, and some were existing even in 1960. The inclusion of government quarters especially impacts on urban areas, as government quarters comprised over 34 percent of all urban areas in 1980.

Table 1.16 Population of Census Designated Places: 1960 to 1980

Census Designated Place	1980	1970	1960
Total	69106	35079	28567
South	24248	10616	7627
Andersen Air Force Base	4892	...	...
Dededo Village	2524	2386	2247
Finegayan Station	3538	...	...
Marbo Annex	1040	...	...
Tamuning Village	8862	8230	5380
Yigo Village	3392	...	...
Central	27870	16257	13000
Agana Village	896	2119	1642
Agana Heights Village	2970	3156	3210
Agana Station	2060	...	...
Asan Village	726	755	543
Barrigada Village	3127	1549	1729
Barrigada Hts Subdivision	1127	...	...
Chalan Pago Village	1921	...	...
Latte Heights Subdivision	1056	...	...
Maina Village	891	...	...
Maite Village	419	...	...
Mangilao Village	4029	...	...
Mongmong Village	2058	5052	2285
Nimits Hill Annex	417	...	...
Ordot Village	1199	...	...
Piti Village	737	...	...
Sinajana Village	1879	2621	2861
Toto Village	2358	1005	730
South	16988	8206	7940
Agat Village	2908	2612	2596
Apra Harbor	5633	...	...
Inarajan Village	918	614	761
Merizo Village	1500	731	508
Santa Rita Village	1264	1976	1630
Santa Rosa Subdivision	860	...	...
Talofofo Village	1470	844	947
Umatac Village	487	423	393
Yona Village	1948	1006	1105

Note: Symbol "..." indicates an area was not designated a CDP.

SOURCE: U.S. Bureau of the Census PC80-1A-54 1980 Table 9.

Urban areas on Guam contained 40 percent of the population in 1980 or 41,875 persons (Table 1.17). The North was the most densely urban, with half of its population residing in urban areas. The population of the village of Tamuning was 65 percent urban. The federal land areas of Andersen Air

Force Base in Yigo and Finegayan Station in Dededo contributed to the urban density. Nearly 36 percent of the population of Southern Guam resided in urban areas, exclusively in Agat (73 percent urban) and Santa Rita (61 percent urban). In contrast, only 29 percent of the population of Central Guam lived in urban areas, 90 percent in Agana Heights, 40 percent of Barrigada, and 59 percent of Mangilao. The larger percent urban in the South as opposed to Central Guam is the result of military housing in Santa Rita.

Table 1.17 Urban and Rural Residence by Election District: 1980

Region Election District	Number			Percent			Percent Urban
	Total	Urban	Rural	Total	Urban	Rural	
Total 105,979	41,875	64,104	100.0	100.0	100.0	39.5	
North	47,583	23,208	24,375	44.9	55.4	38.0	48.8
Dededo	23,644	6,062	17,582	22.3	14.5	27.4	25.6
Tamuning	13,580	8,862	4,718	12.8	21.2	7.4	65.3
Yigo	10,359	8,284	2,075	9.8	19.8	3.2	80.0
Central	34,526	10,126	24,400	32.6	24.2	38.1	29.3
Agana	896	0	896	.8	0.0	1.4	0.0
Agana Heights	3,284	2,970	314	3.1	7.1	.5	90.4
Asan	2,034	0	2,034	1.9	0.0	3.2	0.0
Barrigada	7,756	3,127	4,629	7.3	7.5	7.2	40.3
Chalan Pago/Ordot	3,120	0	3,120	2.9	0.0	4.9	0.0
Mangilao	6,840	4,029	2,811	6.5	9.6	4.4	58.9
Mong-Toto-Maite	5,245	0	5,245	4.9	0.0	8.2	0.0
Piti	2,866	0	2,866	2.7	0.0	4.5	0.0
Sinajana	2,485	0	2,485	2.3	0.0	3.9	0.0
South	23,870	8,541	15,329	22.5	20.4	23.9	35.8
Agat	3,999	2,908	1,091	3.8	6.9	1.7	72.7
Inarajan	2,059	0	2,059	1.9	0.0	3.2	0.0
Merizo	1,663	0	1,663	1.6	0.0	2.6	0.0
Santa Rita	9,183	5,633	3,550	8.7	13.5	5.5	61.3
Talofofo	2,006	0	2,006	1.9	0.0	3.1	0.0
Umatac	732	0	732	.7	0.0	1.1	0.0
Yona	4,228	0	4,228	4.0	0.0	6.6	0.0

SOURCE: U.S. Bureau of the Census PC80-1-A54 1980, Table 4.

(6) SUMMARY

For the purpose of population analysis, Guam can be divided into Northern, Southern, and Central areas for census periods between 1940 and 1980. The smaller geographic units of election districts are comparable between 1960 and 1980, having undergone extensive reorganization on several occasions prior to 1960.

Prior to World War II, nearly half of Guam's population lived in the one square mile village of Agana, in Central Guam. Military occupation during and after the war dispersed the indigenous population into other areas of the island. Fractional lot problems in Agana contributed to the difficulty of repopulating the village after the war. In other parts of the island, families gave up their inherited lands to the U.S. government, which seized over one-third of Guam's land for defense and recreation purposes.

The decades 1940 through 1980 thus became a period of rapid growth in the north. New inhabitants included both indigenous residents and new off-island migrants from the United States and Asia. The population of the North increased a remarkable 45,788 persons, from 1,795 in 1940 to 47,583 in 1980. Growth in the other regions did not match the population increase of the North. The central region, the most populated area in 1940, added 20,580 persons, while the South grew by 17,321 persons.

In the Southern region, the villages of Merizo, Umatac, and Inarajan have retained their rural character, with interior mountainous areas not suited for housing development. Some new development has occurred during the 1980's in the more gently sloping areas of Yona and Talofofo, as improved roads shorten travel time to the commercial areas further North, and generally improved infrastructure opens the area for development.

Of the individual election districts showing decreases and large increase in population between 1960 and 1970, the number of military personnel living on federal lands was often the source of the change. The population living on federal lands should be taken into account in analyzing the growth trends of election districts. Growth caused by the homeporting of military vessels and declines caused by the closure of military barracks are significant in that they do not affect future birth rates, education needs, or housing markets, nor do fluctuations in the number of military personnel necessarily mean that a trend has been established.

In 1980, 40 percent of the population lived in urban places. Of that 40 percent, one-third lived on military reservations. It is probable that more and more places in the civilian portions of Northern and Central Guam will meet the 2,500 and over resident criterion for urban places in the future as the regions become more populated. The military will probably not contribute greatly to the development of additional urban areas until new government quarters are built.

b) AGE AND SEX CHARACTERISTICS OF THE POPULATION

The median age of Guam's population in 1980 was 22.2 years compared to 30.0 in the United States (Table 2.1 and Figure 2.1). The median age is that age which is the exact mid-point of all ages, that is, half the people were older and half the people were younger. The median had decreased slightly from 18.1 in 1920 to 17.9 in 1940, partly due to the influenza epidemic's remains in 1919 having affected fertility, and the whooping cough epidemic in the 1930s. The median increased by 5 years in 1950 because of relatively large numbers of military stationed on Guam. When many of these persons in the Armed Forces were gone in 1960, the median decreased again, and only increased for the 1980 census, probably as a result of decreased fertility and migration. The median age in 1990 is 25.0 years.

In most populations, the median for females is higher than for males, but the military on Guam affects those figures as well. In the early decades of the century, before the Armed Forces were on Guam in any significant numbers, females generally were older than males (with the exception of 1930). In 1950, the median for males was 3 years older than for females because of the Armed Forces and contract workers sent to support the military. Males were more than 6 years older than females in 1960, and 3 years older in 1970. Partly because of the reduction in the military and a change in their age and sex

structure, and because of the increase in the local populations, by 1980 the median age for males and females was the same.

The median age of the population by region varied over time (Table 2.2). In 1930, the Central region had the lowest median age (16.4 years), followed by the North (17.7 years); by 1950, the Central region had the highest median age (23.3 years), with the North second highest (23.2 years). These fluctuations between regions could be a result of regional migration and the presence of the military in certain regions.

Table 2.2 Median Age by Region: 1930 to 1980

Region	Year					
	1980	1970	1960	1950	1940	1930
Guam	22.2	20.4	20.8	22.8	17.9	18.8
North	22.9	22.1	21.6	23.2	18.3	17.7
Central	22.5	20.0	18.9	23.3	17.7	16.4
South	20.5	18.7	23.4	21.9	18.3	18.1

SOURCE: Bureau of the Census Decennial Reports.

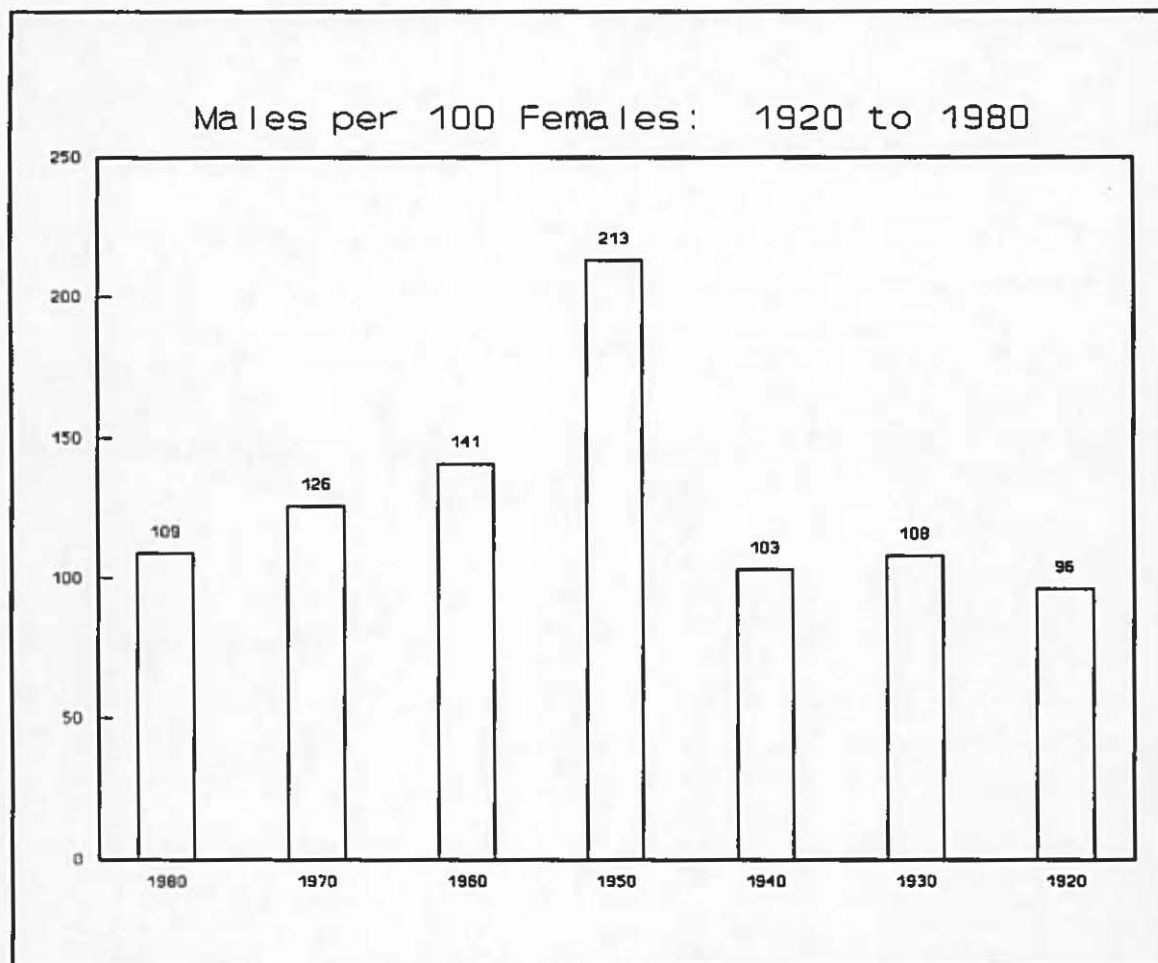
The effect of the Armed Forces on the sex distribution is more clearly seen in Table 2.3 (and Figure 2.2). As noted previously, in most populations there are more females than males. In fact, on Guam in 1920, there were 295 more females than males, but that was the last census to show a surplus of females. The sex distributions in 1930 and 1940 were not abnormal, but by 1950, a change had occurred. In 1950 there were 2,1372 more males than females, and the number of males per 100 females doubled, from 103 in 1940 to 213 in 1950. In 1950, there were more than 2 males for every female on the island. With decreased military activity, the number of males per 100 females decreased, until it reached 109 in 1980, more than any State except Alaska, which had a surplus of males for other reasons.

Table 2.3 Males per 100 Females: 1920 to 1980

Census Year	Males	Females	Surplus Males	Males per 100 Females
1980	55,321	50,658	4,663	109.2
1970	47,362	37,634	9,728	125.8
1960	39,211	27,833	11,378	140.9
1950	40,485	19,013	21,472	212.9
1940	11,294	10,983	311	102.8
1930	9,630	8,879	751	108.5
1920	6,490	6,785	-295	95.7

SOURCE: U.S. Bureau of the Census Decennial Reports.

Figure 2.2 Males per 100 Females: 1920 to 1980



The distribution by age has changed somewhat since 1940, the first decennial census to display 5 years age groups for ages up to 75 years (Table 2.4). Between 1940 and 1950, the percentages of persons under 5 decreased, probably partly because of residual reduced fertility following the war, but primarily because of increased migration of Armed Service personnel and contract workers. The change in the 5 to 14 year olds was even greater, decreasing by 7 percentage points for the 5 to 9 years olds and 6 percentage points for the 10 to 14 year olds. Much of this decrease must be attributed to many women not having children during the war years.

This group which would normally have created an unusual effect in the age distribution over time, much as the baby boomers has created a bulge which is gradually working its way through the age distribution in the United States, cannot be seen for later censuses because of the great influx of military personnel and contract workers, starting in the 1940s. When this group was 15 to 24, the number of Armed Forces personnel in this same age group was so great, that the Natives have to be disaggregated to see the effects on that segment of the population.

Table 2.4 Population by Age and Sex: 1940 to 1980

Age Group	Numbers					Percent				
	1980	1970	1960	1950	1940	1980	1970	1960	1950	1940
Total . . .	105,979	84,996	67,044	59,498	22,290	100.0	100.0	100.0	100.0	100.0
0 to 4 . . .	13,002	11,635	10,824	7,568	3,746	12.3	13.7	16.1	12.7	16.8
5 to 9 . . .	12,632	11,762	9,164	4,453	3,261	11.9	13.8	13.7	7.5	14.6
10 to 14 . . .	11,338	10,304	7,254	4,084	2,827	10.7	12.1	10.8	6.9	12.7
15 to 19 . . .	10,993	8,049	4,994	7,162	2,228	10.4	9.5	7.4	12.0	10.0
20 to 24 . . .	11,108	10,270	6,744	11,378	1,870	10.5	12.1	10.1	19.1	8.4
25 to 29 . . .	10,324	6,406	5,572	7,275	1,719	9.7	7.5	8.3	12.2	7.7
30 to 34 . . .	9,289	6,171	6,617	5,452	1,455	8.8	7.3	9.9	9.2	6.5
35 to 39 . . .	6,246	5,474	5,151	4,044	1,203	5.9	6.4	7.7	6.8	5.4
40 to 44 . . .	5,049	4,792	3,403	2,761	946	4.8	5.6	5.1	4.6	4.2
50 to 54 . . .	3,983	2,305	1,736	1,216	599	3.8	2.7	2.6	2.0	2.7
55 to 59 . . .	2,914	1,748	1,171	810	501	2.7	2.1	1.7	1.4	2.2
60 to 64 . . .	1,927	1,070	695	483	435	1.8	1.3	1.0	.8	2.0
65 to 69 . . .	1,418	689	478	346	291	1.3	.8	.7	.6	1.3
70 to 74	809	351	271	204	210	.8	.4	.4	.3	.9
75 +	758	440	339	248	174	.7	.5	.5	.4	.8

Note: 1940 includes 13 persons of unknown age.

SOURCE: U.S. Bureau of the Census Decennial Reports.

The military influence is clearly seen in the 1950 census results, since almost 1 in every 5 persons on Guam was between 20 and 24 in that year, up from only 1 in 12 in 1940. The proportion decreased to about 1 in 10 in 1960 and subsequent years. About 1 in every 8 persons on Guam in 1950 was between 15 and 19, and about the same proportion were between 25 and 29. Altogether about 43 percent of the population in 1950 was between 15 and 29.

About 16 percent of the 1960 population were under 5, and another 14 percent were 5 to 9, showing the effects of the baby boom on Guam. By 1970, fertility had begun to decrease, with only 14 percent of the population less than 5 years old, and by 1980 the decrease continued, to 12 percent of the population.

The proportion of the population which was elderly remained low throughout the period, partly because of the influence of the presence of the military (which decreased the percentage of youth as well as elderly), and partly because the birth rate was high, and continued to be fairly high even in 1980 (although very low compared to the developing world). Just over 3 percent of the population in 1940 was 65 years and over. The proportion of elderly decreased to between 1 and 2 percent from 1950 to 1970, and increased to 3 percent again in 1980. As will be shown in Chapter 8 on ethnicity, most of the elderly were Chamorro, so that as the rest of the population ages, the percentage of elderly will increase, as will the need to provide housing and other services for these persons. Traditionally, Chamorro culture has made provisions for its elderly, with specific roles within the extended family context. As the society has "westernized" many of these roles have changed, resulting in the likelihood of new mechanisms being needed to care for the elderly, particularly as non-Chamorros become part of this group.

(1) DEPENDENCY RATIO

The dependency ratio is derived by dividing the sum of persons under 15 (the pre-labor force youth) and the elderly (those over 64), by the persons generally included in the potential labor force (those 15 to 64), and multiplying by 100. A dependency ratio of 100 would mean that there is exactly one dependent for each potential worker; a higher number would mean that there are more dependents than workers, and a lower number means that there are more workers than dependents.

In 1940, before the military "invasion", the population was closest to a dependency ration of 100, with a figure of 89 (89 dependents for every 100 potential workers) (Table 2.5). The dependency ratio in 1950 was only 40 less than half of the ratio for 1940, showing both greatly reduced fertility in the war years and the huge influx of military personnel in the late 1940s. This value is unlikely to occur in any "natural" environment, and is due to the large numbers of young and middle-aged adults on island in connection with the Armed Forces. This kind of figure makes analysis of the dependency ratios fairly useless since some segments of the population were still living at subsistence levels, and other segments were living off an artificially constructed economy, including PXs and other imported goods and materials.

The dependency ratios in 1960, 1970, and 1980, continued to show the influence of the military. After a jump in 1960 because of proportionally fewer military on island however, the ratio continued to decrease to 60 in 1980. The decrease in the 20 years before the 1980 census was due both to increased immigration of aliens in the middle years (as well as Statesiders), and decreased fertility (which was far greater than the slight increase in the elderly population).

Table 2.5 Dependency Ratios: 1940 to 1980

Age Group	1980	1970	1960	1950	1940
Total	105,979	84,996	67,044	59,498	*22,277
0 to 14	36,972	33,701	27,242	16,105	9,834
15 to 64	66,022	49,815	38,714	42,595	11,768
65 +	2,985	1,480	1,088	798	675
Dependency Ratio	60.5	70.6	73.2	39.7	89.3

* Excludes 13 persons of unknown age.

SOURCE: U.S. Bureau of the Census Decennial Reports.

The male population has shown the fluctuations in the age distribution more dramatically than the female population, because most of the early military personnel were males (Table 2.6). Again, the age distribution for 1940 was fairly "normal" because most of the residents were Chamorros and were living without military activity. In 1950, all of this had changed.

In 1950, almost 1 in every 4 males was between 20 and 24, another 14 percent were between 15 and 19, and another 13 percent were between 25 and 29. Hence, more than half the males were in this 15 year age range. Most of these males were military personnel. The proportion of males in this age range has remained large throughout the rest of the period because of continued military activity on island.

Table 2.6 Males by Age and Sex: 1940 to 1980

Age Group	Numbers					Percent				
	1980	1970	1960	1950	1940	1980	1970	1960	1950	1940
Males	55,321	47,362	39,211	40,485	11,300	100.0	100.0	100.0	100.0	100.0
0 to 4	6,620	5,962	5,614	3,885	1,945	12.0	12.6	14.3	9.6	17.2
5 to 9	6,458	6,054	4,593	2,286	1,734	11.7	12.8	11.7	5.6	15.4
10 to 14	5,835	5,362	3,685	2,129	1,463	10.5	11.3	9.4	5.3	13.0
15 to 19	5,849	4,148	3,053	5,583	1,092	10.6	8.8	7.8	13.8	9.7
20 to 24	6,019	6,642	4,527	9,613	885	10.9	14.0	11.5	23.7	7.8
25 to 29	5,194	3,569	3,386	5,231	897	9.4	7.5	8.6	12.9	7.9
30 to 34	4,854	3,538	4,526	3,812	748	8.8	7.5	11.5	9.4	6.6
35 to 39	3,386	3,267	3,440	2,850	621	6.1	6.9	8.8	7.0	5.5
40 to 44	2,650	3,038	2,172	1,859	504	4.8	6.4	5.5	4.6	4.5
45 to 49	2,171	2,192	1,684	1,380	402	3.9	4.6	4.3	3.4	3.6
50 to 54	2,238	1,334	1,036	793	300	4.0	2.8	2.6	2.0	2.7
55 to 59	1,634	1,015	642	482	231	3.0	2.1	1.6	1.2	2.0
60 to 64	1,008	577	367	243	199	1.8	1.2	.9	.6	1.8
65 to 69	729	324	223	157	119	1.3	.7	.6	.4	1.1
70 to 74	392	160	117	84	83	.7	.3	.3	.2	.7
75 +	284	180	146	98	71	.5	.4	.4	.2	.6

SOURCE: U.S. Bureau of the Census Decennial Reports.

The female population on Guam has not seen the tremendous fluctuations the male age distribution experienced (Table 2.7). Some of this anomaly in the 15 to 29 years old females in the 1950 census can be attributed to wives who accompanied their husbands for military duty on island.

The increase in percentage of females in the 0 to 4 age group between 1940 and 1950 (from 16 to 19 percent) probably reflects real growth in this age group, and, if the military were excluded from the male distribution, males also would probably exhibit the same pattern. The late 1940s saw the beginning of the baby boom on Guam as elsewhere, so that the high rates of 0 to 4 years olds in 1950 and 1960 reflect this higher fertility; almost 1 in every 5 females in those two censuses were less than 5 years old. After the 1960 census, the percentage of these females decreased, partly as a result of the baby bust, and partly because of increased migration of aliens and persons from the States (including increased numbers of female military personnel).

Figure 2.6 Age and Sex Distribution: 1970

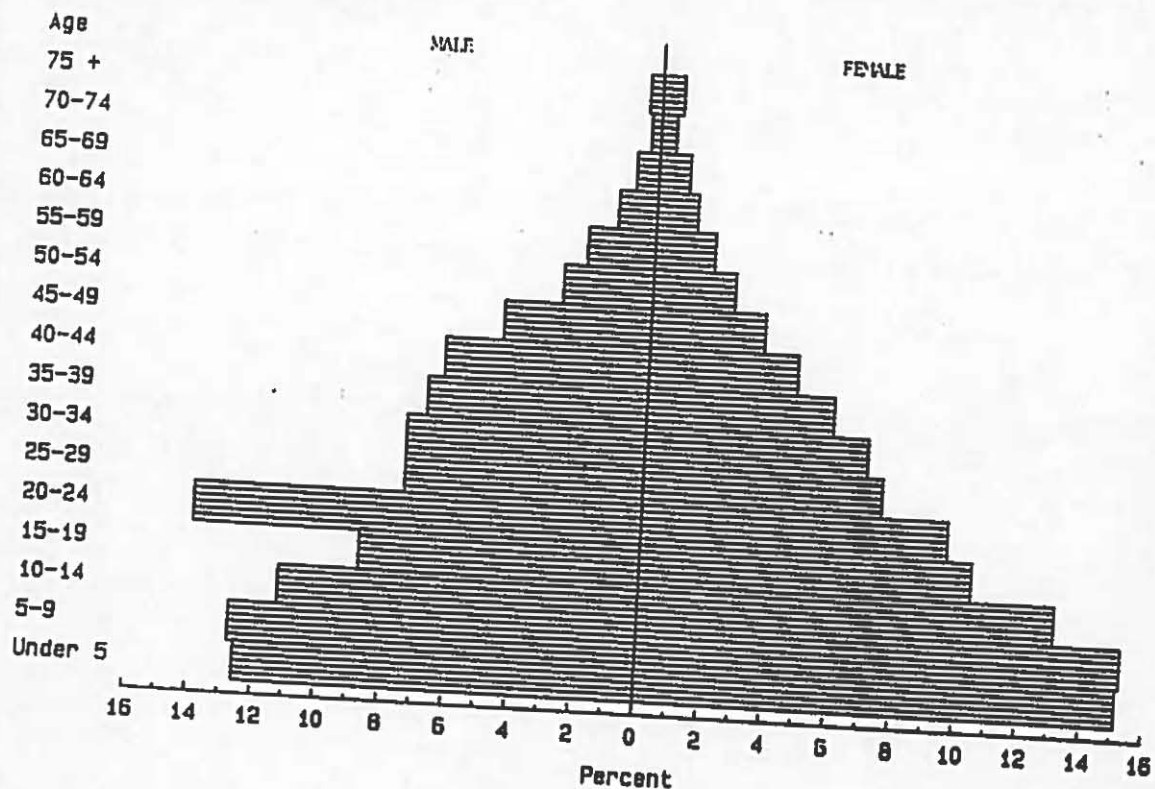
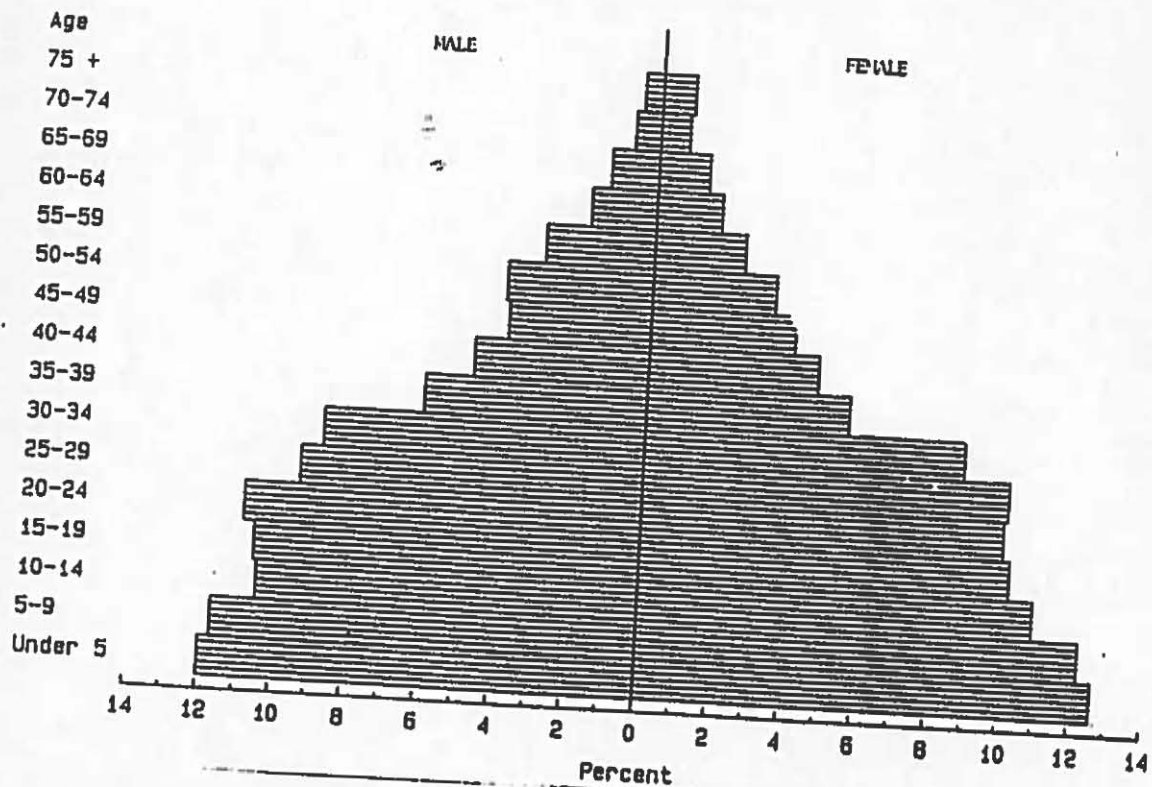


Figure 2.7 Age and Sex Distribution: 1980



(2) SEX RATIO

As noted earlier, the number of males per 100 females increased from 103 to 213 between 1940 and 1950 because of the influx of military personnel, and then decreased first of 141 in 1960, then to 126 in 1970, and 109 in 1980 (Table 2.8 and Figure 2.8). As would be expected, the proportions for young ages were closer to even numbers of males and females (although we do not expect a figure of 100, because, world-wide, there are about 106 males born for every 100 females).

The coming of the military to Guam also affected the proportion of males and females in the military ages. In 1950, for example, there were 354 males for every 100 females aged 15 to 19, 545 males per 100 females aged 20 to 24, 256 for those 25 to 29, with diminishing proportions after that. As time has gone by, these proportions have decreased, but in some ages have remained high, especially compared with similar populations in the States and elsewhere. By 1960, only 20 to 24 and 30 to 39 year olds had more than 2 males for each female, and none of the age groups in 1960 had this disparity (although there were 183 males 20 to 24 years old for every 100 females in that age group).

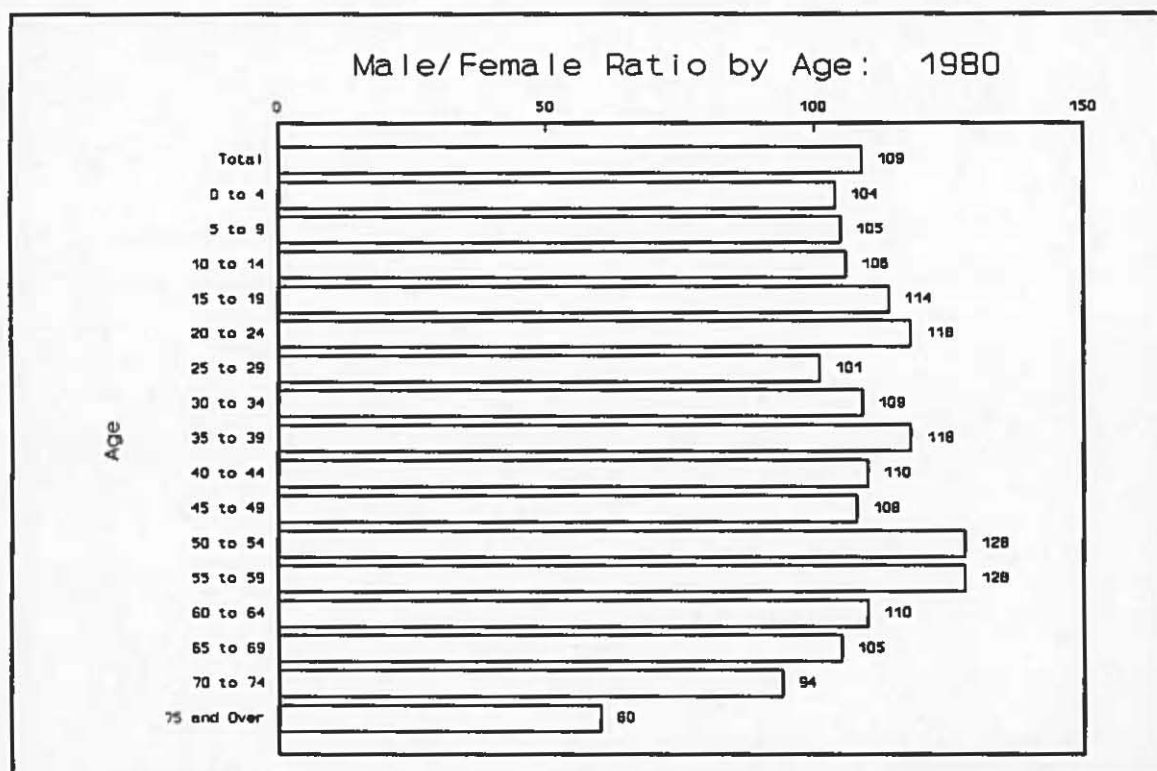
There were more females than males 65 years and over (except for those 65 to 69 in 1980) for each of the censuses, showing increased male mortality in the older age groups.

Table 2.8. Males per 100 Females by Age: 1940 to 1980

Age Group	Surplus of Males					Males Per 100 Females				
	1980	1970	1960	1950	1940	1980	1970	1960	1950	1940
Total	4663	9728	11378	21472	310	109.2	125.8	140.9	212.9	102.8
0 to 4	238	289	404	202	144	103.7	105.1	107.8	105.5	108.0
5 to 9	284	346	22	119	207	104.6	106.1	100.5	105.5	113.6
10 to 14	332	420	116	174	99	106.0	108.5	103.3	108.9	107.3
15 to 19	705	247	1112	4004	-44	113.7	106.3	157.3	353.6	96.1
20 to 24	930	3014	2310	7848	-100	118.3	183.1	204.2	544.6	89.8
25 to 29	64	732	1200	3187	75	101.2	125.8	154.9	255.9	109.1
30 to 34	419	905	2435	2172	41	109.4	134.4	216.5	232.4	105.8
35 to 39	526	1060	1729	1656	39	118.4	148.0	201.1	238.7	106.7
40 to 44	251	1284	941	957	62	110.5	173.2	176.4	206.1	114.0
45 to 49	153	854	737	746	-8	107.6	163.8	177.8	217.7	98.0
50 to 54	493	363	336	370	1	128.3	137.4	148.0	187.5	100.3
55 to 59	354	282	113	154	-39	127.7	138.5	121.4	147.0	85.6
60 to 64	89	84	39	3	-37	109.7	117.0	111.9	101.2	84.3
65 to 69	40	-41	-32	-32	-53	105.8	88.8	87.5	83.1	69.2
70 to 74	-25	-31	-37	-36	-44	94.0	83.8	76.0	70.0	65.4
75 +	-190	-80	-47	-52	-32	59.9	69.2	75.6	65.3	68.9

SOURCE: U.S. Bureau of the Census Decennial Reports.

Figure 2.8 Male/Female Ratio by Age: 1980



(3) AGE DISTRIBUTION

Table 2.9 shows the distribution by age for the election districts on Guam. The overall median age for Guam was 22.2 years, with the North and Central regions having higher median ages, and the South being younger.

Umatac had the lowest median age at 17.4 years, followed by Inarajan (17.9 years), and Talofofo (18.2). Other villages with low median ages were Merizo (18.5), Yona (18.6), and Chalan Pago-Ordot (19.0); only the last village was not in the Southern region. The percentage of persons less than 18 years old also reflects the relative youth in these villages. Overall, 41 percent of Guam's population was less than 18 years old. Central and Northern regions had slightly smaller percentages of persons in this age group (40 percent for each), compared to the 45 percent for South. Both Umatac and Inarajan had more than half their populations under 18 years old, the result of high fertility, and probably less migration of young adults to these southern villages.

About 3 percent of the population was 65 years or older. More than 6 percent of those living in Agaña were 65 years or older, as were more than 5 percent of those in Agaña Heights. Sinajana, Agat, and Inarajan each had slightly less than 5 percent of their populations being elderly.

These data seem to show that the South remains somewhat more traditional than the Central and Northern regions, with higher fertility, and less military and other in-migration. The villages in the extreme South seem even more traditional in age structure than the others.

Table 2.9 Age by Region and Election District: 1980

Election District	Popula- tion	Number			Percent			Median Age
		Under 18 yrs	18 to 64 yrs	65 + years	Under 18 yrs	18 to 64 yrs	65 + years	
Total	105979	43604	59390	2985	4.1	56.1	2.8	22.2
North	47583	19241	27156	1198	40.4	57.1	2.5	22.9
Dededo	23644	10640	12467	567	45.0	52.6	2.4	20.9
Tamuning	13580	4549	8555	475	33.5	63.0	3.5	26.4
Yigo	10359	4040	6164	155	39.0	59.5	1.5	22.2
Central	34526	13633	19765	1128	39.5	57.2	3.3	22.5
Agana	896	275	566	55	30.7	63.2	6.1	27.4
Agana Heights	3284	1261	1855	167	38.4	56.5	5.1	23.7
Asan	2034	775	1170	92	38.1	57.5	4.5	23.3
Barrigada	7756	3017	4506	233	38.9	58.1	3.0	22.2
Chalan Pago-								
Ordot	3120	1498	1507	115	48.0	48.3	3.7	19.0
Mangilao	6840	2859	3837	144	41.8	56.1	2.1	22.3
Mongmong-Toto-								
Maite	5245	2229	2874	142	42.5	54.8	2.7	21.6
Piti	2866	616	2190	60	21.5	76.4	2.1	23.6
Sinajana	2485	1103	1260	122	44.4	50.7	4.9	20.6
South	23870	10728	12481	659	44.9	52.3	2.8	20.5
Agat	3999	1848	1964	188	46.2	49.1	4.7	20.2
Inarajan	2059	1038	924	97	50.4	44.9	4.7	17.9
Merizo	1663	812	790	62	48.8	47.5	3.7	18.5
Santa Rita	9183	3600	5446	138	39.2	59.3	1.5	22.3
Talofofo	2006	991	953	62	49.4	47.5	3.1	18.2
Umatac	732	378	342	12	51.6	46.7	1.6	17.4
Yona	4228	2063	2063	101	48.8	48.8	2.4	18.6

SOURCE: U.S. Bureau of the Census PC80-1-B54, Table 14.

(4) SUMMARY

While the median age in 1980 was less than that of the U. S., Guam's population is aging. Median age was higher for civilian females than for civilian males; the opposite was true for the military, and the overall median age for the military was higher than that of civilians. The proportion of the total population less than 5 years old was 12 percent; the proportion over 65 years was 3 percent. The dependency ration in 1980 was 60.5.

From 1930 onward, the sex ratio of the population was greater than 103; it was 109 in 1980. The sex ratio was higher for both military persons and military households.

The military dominated in the age groups less than 5 years and 20 to 34 years; civilians did so in all other age groups. Due to definitions of military households used in special retabulations of the 1980 census, some military dependent spouses were put into the civilian category, causing surpluses of female civilians in certain age groups.

We have briefly presented data on the age and sex distribution of the population on Guam for 1940 through 1980. It is clear that because of the military presence and the large amount of immigration, Guam will not show a "normal" population distribution for the foreseeable future.

CHAS Table 2A

U.S. Department of Housing and Urban Development
Office of Community Planning and Development

POPULATION AND MINORITY DATA

Comprehensive Housing Affordability Strategy (CHAS)

Jurisdiction of Consortium:		Five Year Period: (enter fiscal Year)
		FY: through FY:
Category	1980 Census Data (A)	1990 Census Data or Current Estimate (B)
1. Total Population	105,979 (100.0%)	133,152
2. White (Non-Hispanic)	26,901 (25.4%)	19,160 (14.4%)
3. Other (includes Asians)	8,806 (8.3%)	19,792 (14.9%)
4. Filipinos	22,447 (21.2%)	30,043 (22.6%)
5. Chamorros	47,825 (45.1%)	57,648 (43.2%)
6. Micronesian & Pacific Islander	Not Available	6,509 (4.9%)
7. Group Quarters	4,979	Not Available
8. Institutional	144	Not Available
9. Non-Institutional	4,835	Not Available
10. Household Population	101,000	Not Available

form HUD-40090 (5/16/91)

c) HOUSEHOLD CHARACTERISTICS OF THE POPULATION

In 1960, a household was defined as all persons who occupied a housing unit. A house, apartment or other group of rooms, or a single room was a housing unit when it was occupied or intended for occupancy as a separate living quarters; that is, when the occupants did not live and eat with any other persons in the structure and when there was either direct access from outside or through a common hall, or a kitchen or cooking equipment for the exclusive use of the occupant. Groups of 5 or more persons living together, who were unrelated to the person in charge, were designated as living in group quarters.

The 1960 definition of a household differed slightly from that of 1950: the change arose as a result of the shift from a dwelling unit to a housing unit as the basis of enumeration. The number of household in 1960, however, is considered comparable to the number of households in 1950.

In the 1970 Census, substantial changes were made to the definition of a family, with families, households and group quarters being differentiated. According to the new definitions, a family consisted of a household head and one or more other persons living in the same household who were related to the head by blood, marriage, or adoption. All living arrangements other than households were classified as either "institutional" or "other" group quarters. Separate living quarters were group quarters if there were 5 or more persons unrelated to the head, or, if there was no designated head, 6 or more unrelated persons in the unit. Places that fell into this category were rooming and boarding houses, communes, worker's dormitories and convents. Military barracks and ships were regarded as group quarters regardless of the number or relationship of people in the unit.

In 1970, single persons living alone were considered single person households rather than families. Groups consisting of less than 5 unrelated persons living together (that were not in barracks, institutions, hotels, or dormitories) were "unrelated person" households rather than "quasi-families". "Subfamilies", married couples with or without children, or 1 parent with 1 or more single children under 18 years old, that were living in a household and related to, but not including, the head of household or his wife, was a new definition that began with the 1970 Census.

The 1980 Census continued with the subfamily designation and the differentiations between family- and non-family households. However, no designation of head of household was made in the 1980 questionnaire. The definition of group quarters was changed from 5 or more persons unrelated to the head of household (now called householder), to 9 or more persons unrelated to householder. If there were no head of household, 10 or more unrelated persons in a unit made it group quarters, instead of the previous requirement of 6 or more unrelated persons. This change in definition made some units that were group quarters in 1970 into households in 1980. The definition did not change for certain types of living arrangements, such as military barracks or ships.

HOUSEHOLD CHARACTERISTICS

Households with 2 or more persons made up 91 percent of all households on Guam in 1980 (Table 3.1). Single person households made up the remaining 9 percent.

Of those households with 2 or more persons, 82 percent were married couple families, 15 percent were other family households, and 4 percent were non-family households. Other family households were more often headed by females with no husband present (73 percent) than by males with no wife present (27 percent). The opposite was true of non-family households: 73 percent of these were headed by male householders and 27 percent by female householders. More males lived in single person households (64 percent) than did females (36 percent).

Table 3.1 Households by Persons in Household and Household Type: 1980

		Number				Percent			
		Total	North	Cntrl	South	Total	North	Cntrl	South
	Total Households .	24834	11595	8070	5169	100.0	100.0	100.0	100.0
1	person	2246	1061	896	269	9.0	9.2	11.1	5.2
	Male householder . .	1415	698	545	172	5.7	6.0	6.8	3.3
	Female householder . .	811	363	351	97	3.3	3.1	4.3	1.9
2	persons	22608	10534	7174	4900	91.0	90.8	88.9	94.8
	Married couple								
	family	18473	8696	5597	4180	74.4	75.0	69.4	80.9
	Other family	3307	1413	1251	643	13.3	12.2	15.5	12.4
	Male householder, no								
	wife present . .	892	435	320	137	3.6	3.8	4.0	2.7
	Female householder, no								
	husband present	2415	978	931	506	9.7	8.4	11.5	9.8
	Nonfamily household	828	425	326	77	3.3	3.7	4.0	1.5
	Male householder	602	314	236	52	2.4	2.7	2.9	1.0
	Female householder	226	111	90	25	.9	1.0	1.1	.5

SOURCE: U.S. Bureau of the Census Summary Tape File 1A, 1980, Table 16.

There were slight differences in type of household region: the Central region had a greater proportion of single person households than the other 2 regions, with the majority of single householders being male. The South had the smallest proportion of single female-headed households. The South claimed the highest percentage of households with 2 or more persons, followed by the North. The South also had the highest proportion of married-couple family households. The Central region had the highest percentage of female-headed family households.

Tables 3.2 through 3.4 show household and family composition from 1940 through 1980 as percentages of persons in each category. In 1940, 98 percent of the population of Guam lived in households. This proportion dropped to 62 percent in 1950, then steadily rose to 95 percent in 1980. The decrease in the proportion living in households from 1940 to 1950 can be attributed to an influx of military personnel and alien laborers after the end of World War II, most of whom lived in barracks-style housing. Their proportion of the population rose from 2 percent in 1940 to 38 percent in 1950. From 1950 to 1980, the increase in the proportion of persons living in households, from 62 percent to 95 percent, was paralleled by a decrease in the proportion living in non-institutional group quarters, which fell from 38 percent to 5 percent.

Table 3.2 Percent Household Type: 1940 to 1980

Persons in Households	1980	1970	1960	1950	1940
Total persons	105979	84996	67044	59498	22290
Percent	100.0	100.0	100.0	100.0	100.0
In households	95.3	88.5	82.2	61.9	97.7
In families	91.2	85.5	80.1	(NA)	(NA)
In non family households	4.1	2.9	2.1	(NA)	(NA)
In group quarters	4.7	11.5	17.8	38.1	2.3

SOURCE: U.S. Bureau of the Census Summary Tape File 1A, Table 17; Decennial Census Reports.

Most (97 percent) households were family households, and were composed of a head, spouse of the head, and other relatives of the head, primarily the own children of the head (Table 3.3). The proportion of the population in families increased slightly in each of the last 3 censuses, as did the proportion who were heads and spouses of heads of families. Single females as heads of families increased by 44 percent between 1970 and 1980. The proportion of children of family heads increased by 9 percent between 1960 and 1970, then decreased by 13 percent between 1970 and 1980. It would seem from the increase in families, heads of families, and spouses of family heads, and the decrease in own children of heads of families, that many of these family households in 1980 were married couples with no children who began new family homes between 1970 and 1980.

Table 3.3 Percent Family Composition: 1960 to 1980

Persons in Families	1980	1970	1960
Total persons	105979	84996	67044
In households	101000	75333	55140
Percent	100.0	100.0	100.0
In families	95.7	96.5	97.4
Head of family	21.6	19.0	18.5
Female, no husband present*	2.4	1.8	(NA)
Male, no wife present	.9	(NA)	(NA)
Spouse	18.3	16.0	16.1
Other relatives	55.0	61.6	62.8
Own child of head under 18 yrs.	39.1	48.6	48.1
Other relative of head	15.91	12.9	14.7
Not related to head**	.8	(NA)	(NA)
Not in families	4.3	3.5	2.5

*For 1960, it is not specified whether husband is present.

**For 1960 and 1970, it is not indicated whether unrelated individuals are in family or non-family households.

SOURCE: U.S. Bureau of the Census Summary Tape File 1A Table 17; Decennial Census Reports.

The population that resided in either non-family households or in group quarters steadily decreased between 1960 and 1980 (Table 3.4). Of that population, the majority were in group quarters, though this proportion also decreased. The proportion of those in group quarters who were inmates of institutions remained constant at 1 percent for the period; the greatest changes were for those in "Other" group quarters: military or construction barracks. In non-family households, both the percentage who were

head of households and those not related to the head increased. The greatest amount of this increase was contributed by male householders, whose proportion increase by 232 percent between 1970 and 1980. Some of these male householders were men who separated or divorced between 1970 and 1980 and began new households; some were military personnel who chose not to live in group quarters on base, and rented house off base.

Table 3.4 Percent Non-family and Group Quarters: 1960 to 1980

Persons	1980	1970	1960
Total persons	9359	12270	13342
Percent	100.0	100.0	100.0
In non-family households	46.8	20.4	10.6
Head of household	32.6	10.2	4.5
Male householder	21.6	6.5	(NA)
Female householder	11.1	3.7	(NA)
Not related to head	14.2	10.2	6.0
In group quarters	53.2	79.6	89.4
Inmate of institution	1.5	1.1	1.0
Other	51.7	78.5	88.4

For 1960 and 1970, it is not indicated whether unrelated individuals are in family or non-family households.

SOURCE: U.S. Bureau of the Census Summary Tape File 1A Table 17; Decennial Census Reports.

(1) HOUSEHOLD SIZE

The average size of households on Guam steadily decreased from 1940 to 1980. In 1940, the average size of a household was 5.57 persons, decreasing to 4.99 persons in 1950. By 1980, household size had further decreased to an average of 4.0 persons. The civilian community of Guam in 1980 had a larger average household size than did the military, 4.2 persons and 3.4 persons, respectively. The average number of persons per household in the United States in 1980 was 2.7 persons, only two-thirds the size of Guam's average household.

Household size also changed within regions over the years, with Southern villages almost always having larger households than any other region. Table 3.5 shows the average household size by region from 1940 to 1980. In 1940, the region with the largest average number of persons per household was the South, with 6.6 persons; the region with the smallest average was the North, with 4.4. In 1950, the region with the most persons per household was the Central region, which had 5.34 persons per home on the average; the North had the smallest average household size, with 4.0.

Table 3.5 Average Number of Persons per Household by Region: 1940 to 1980

Region	Persons per Household				
	1980	1970	1960	1950	1940
Total	4.07	4.83	5.09	4.99	5.57
North	3.96	4.59	4.63	4.06	4.47
Central	3.98	4.91	5.24	5.34	5.74
South	4.43	5.11	5.45	5.22	6.66

Note: For 1940 and 1950, "regions" are municipalities.

SOURCE: U.S. Bureau of the Census Decennial Census Reports.

By 1960, tabulations of average household size were computed by election district (used interchangeably with "village" in this monograph) as well as by geographical region (Table 3.6). In that year the village with the highest number of persons per household was Talofoto, with an average of 7.0 persons. The lowest average household size was in Santa Rita, with 4.2 persons. Both of these villages were in the Southern region, the region with the largest average household size, which had an average of 5.4 persons per home. The region with the smallest household size, which had an average of 5.4 persons per home. The region with the smallest household size was the North, with 4.6 persons.

In 1970, Umatac claimed the largest average household size, with 6.2 persons, and Agana had the smallest, with 3.9. The region with the largest average household size was again the South, with 5.1 persons per household. The region with smallest average was the North, with 4.5. This distribution was true again in 1980: Umatac had the largest households with 5.6 persons per household, Agana the smallest with 3.0. The South was the region with the largest households, having an average of 4.4 persons, and the North had the smallest, with 3.9.

Table 3.6 Average Number of Persons per Household by Election District: 1960 to 1980

Persons per Household				
Election District		1980	1970	1960
Total	.....	4.07	4.83	5.09
North	.....	3.96	4.59	4.63
Dededo	.....	4.57	4.81	4.89
Tamuning	.....	3.25	4.44	4.70
Yigo	.....	3.87	4.48	4.35
Central	.....	3.98	4.81	5.24
Agana	.....	3.01	3.99	4.51
Agana Heights	.....	3.81	4.62	4.88
Asan	.....	3.80	4.72	4.81
Barrigada	.....	4.10	5.06	5.32
Chalan Pago-Ordot	.....	4.71	5.64	6.09
Mangilao	.....	3.87	4.64	5.04
Mongmong-Toto-Maite	.....	3.97	4.75	5.00
Piti	.....	3.61	5.28	5.41
Sinajana	.....	4.34	5.52	6.10
South	.....	4.43	5.11	5.45
Agat	.....	4.66	5.39	5.85
Inarajan	.....	5.21	6.12	6.68
Merizo	.....	4.70	5.71	6.26
Santa Rita	.....	3.90	4.18	4.25
Talofofo	.....	4.97	5.85	7.01
Umatac	.....	5.63	6.25	6.83
Yona	.....	4.62	5.95	5.70

SOURCE: U.S. Bureau of the Census Decennial Census Reports.

Not only has the size of households changed over the years, the number and distribution have as well. Tables 3.7 and 3.8 show the number and proportion of households per region and village for 1940 through 1980. In 1940, the Central region had the highest number and, accordingly, the greatest proportion of households. The region with the smallest number of households was the North. In 1950 this had changed only slightly: Central again had the largest number of households, and the Northern region the smallest.

Table 3.7 Households per Region: 1940 to 1980

Region	Number					Percent				
	1980	1970	1960	1950	1940	1980	1970	1960	1950	1940
Total	24834	15569	10807	7373	9313	100.0	100.0	100.0	100.0	100.0
North	11595	6052	3309	1792	402	46.7	38.9	30.6	24.3	10.3
Central	8070	5751	4539	3453	2398	32.5	36.9	46.8	46.8	61.3
South	5169	3766	2959	2128	1113	20.8	24.2	27.8	28.9	28.4

Note: For 1940, households are private families.

SOURCE: U.S. Bureau of the Census Decennial Census Reports.

In 1960, the Central region had the largest number of households, and the South had the smallest. The village with the largest number of households overall was Santa Rita, with 1241 or 11.5 percent of the total number of households; the smallest was Umatac, with only 109, or less than 1 percent of the total households (Table 3.8).

In 1970, the North had become the largest region, which contained 6052 households or 38.9 percent of the total number of homes. This was an 83 percent increase in the number of homes in that region (Tables 3.8 and 3.9). By comparison, the number of households had only increased by 27 percent in both the Central and Southern regions. One village even had a decrease in the number of households reported between the 1960 and 1970 Censuses: Piti reported 3 homes less in 1970 than it had in 1960.

By 1980 the Northern region had increased its number of households by another 92 percent over 1970 levels, while the Central region had increased by 40 percent and the South had grown by 37 percent. However, these increases were not uniform: Agana, Asan, And Sinajana had each lost households in the Central region, and Umatac, in the South, had not changed at all from 1970.

Table 3.8 Households per Village and Region: 1960 to 1980

Village	Number			Percent		
	1980	1970	1960	1980	1970	1960
Total	24834	15569	10830	100.0	100.0	100.0
North	11595	6052	3309	46.7	38.9	30.6
Dededo	5104	2067	948	20.6	13.3	8.8
Tamuning	4067	2039	1159	16.4	13.1	10.7
Yigo	2424	1946	1202	9.8	12.5	11.1
Central	8070	5751	4562	32.5	36.9	42.1
Agana	294	453	318	1.2	2.9	2.9
Agana Heights	827	625	615	3.3	4.0	5.7
Asan	526	552	539	2.1	3.5	5.0
Barrigada	1747	1230	1020	7.0	7.9	9.4
Chalan Pago-Ordot	1709	667	304	6.9	4.3	2.8
Mongmong-						
Toto-Maite	1312	843	586	5.4	5.4	5.4
Piti	422	236	262	1.7	1.5	2.4
Sinajana	573	633	633	2.3	4.1	5.9
South	5169	3766	2959	20.8	24.2	27.3
Agat	853	780	529	5.0	4.9	4.9
Inarajan	392	307	259	1.6	2.0	2.4
Merizo	351	266	222	1.4	1.7	2.0
Santa Rita	2131	1529	1241	8.6	9.8	11.4
Talofofo	398	322	193	1.6	2.1	1.8
Umatac	130	130	109	.5	.8	1.0
Yona	914	432	406	3.7	2.8	3.7

SOURCE: U.S. Bureau of the Census Decennial Census Reports.

The shift in household and population location is even more visible when comparing the differences over a 20-year span than over 10 year increments (Table 3.9). From 1960 to 1980, the Central and Southern regions had increased their numbers of households by 77 and 75 percent, respectively, while the Northern region grew by 250 percent. Some of this growth can be attributed to the opening of military housing areas in Dededo in the 1970's, but the majority is due to new civilian low cost housing tracts, which

began being built in that village and Yigo in the 1970's, and the proliferation of apartment units in Tamuning.

Table 3.9 Percent Change in Households per Region: 1940 to 1980

Region	Percent Change from Previous Census				
	1970- 1980	1960- 1970	1960- 1980	1950- 1960	1940- 1950
Total	59.5	43.8	129.3	46.9	88.4
North	91.6	82.9	250.4	84.6	345.8
Central	40.3	26.1	76.9	31.4	44.0
South	37.2	27.3	74.7	39.0	91.2

SOURCE: U.S. Bureau of the Census Decennial Census Reports.

(2) FAMILY CHARACTERISTICS

One measure of "family health" is the change in the proportion of the population under 18 years of age living with two parents, which is affected by the amount of divorce; another measure is the increase in the proportion of female heads of households who have no husband present, which is affected by both divorce and out-of-wedlock births. On guam, many unmarried women with children choose to apply for welfare assistance, including subsidized housing, and set up their own households, rather than remain with their parents or other relatives.

Children under the age of 18 were present in 68 percent of all households in 1980 (Table 3.10). These children in households represented over 99 percent of all children under 18 (Table 3.11). In 1970, 81 percent of children lived in a married-couple family. By 1980, this figure was down to 79 percent.

Table 3.10 Households with One or More Persons Under 18 Years By Household Type: 1980

	Number	Percent	Percent
Total households	24834	100.0	(X)
Total households with children	16974	68.3	100.0
Married couple family	14316	57.6	84.3
Other family	2587	10.4	15.2
Male hholder, no wife present	574	2.3	3.4
Female hholder, no husband present	2013	8.1	11.9
Non-family household	71	.3	.4

SOURCE: U.S. Bureau of the Census Summary Tape File 1A, Tables 3 and 19.

Nearly 12 percent of children under 18 years were living in other family households in 1980 (Table 3.12), with the majority, 83 percent, living in their mother's household rather than their father's. Another 9 percent lived with other relatives or nonrelatives: one parent may have resided with them, but not as householder.

Table 3.11 Persons Under 18 by Household Type and Relationship: 1970 and 1980

	Number		Percent	
	1980	1970	1980	1970
Persons under 18 years	43604	38574	100.0	100.0
In household	43549	(NA)	99.9	(NA)
Householder or spouse	48	(NA)	.1	(NA)
Own child of householder	39490	36642	90.6	95.0
In married couple family	34330	31117	78.7	80.7
In other family	5160	5525	11.8	14.3

SOURCE: U.S. Bureau of the Census Summary Tape File 1A 1980 Table 17; PC80-1-B54 1980 Table 15; PC(1)-B54 1970 Tables 5 and 11.

Table 3.12 Persons Under 18 By Household Type and Relationship: 1980

	1980	Percent
Persons under 18 years	43604	100.0
In households	43549	99.9
Householder or spouse	48	.1
Own child of householder	39490	90.6
In married couple family	34330	78.7
In other family	5160	11.8
Female householder	4294	9.8
Male householder	866	2.0
Other relatives	3771	8.6
Nonrelative	240	.6
In group quarters	55	.1
Inmate of institution	16	0.0
Other	39	.1

SOURCE: U.S. Bureau of the Census Summary Tape File 1A 1980 Table 17; PC80-1-B54 1980 Table 15; PC(1)-B54 1970 Tables 5 and 11.

In 1970, there were 12,021 husband/wife families (out of 14,315 total families), and 1,354 female-headed families (Table 3.13). Husband/wife families represented 84 percent of total families; female-headed families were 10 percent of the total. The proportion of married-couple families stayed nearly constant in 1980, at about 85 percent of all families. The proportion of female-headed families, however, had risen to 11 percent; the proportion of male householders with no wife present decreased from 7 percent in 1970 to 4 percent in 1980.

Table 3.13 Own Children Under 18 Years By Family Type: 1970 and 1980

Persons	Number		Percent		Percent	
	1980	1970	1980	1970	1980	1970
Families	21780	14315	100.0	100.0	(X)	(X)
With own children						
under 18 yrs	15913	10895	73.1	76.1	(X)	(X)
Married couple families	18473	12021	84.8	84.0	100.0	100.0
With own children						
under 18 yrs.	13770	9413	63.2	65.8	74.5	78.3
Female hhldr. no husband						
present	2415	1354	11.1	9.5	100.0	100.0
With own children						
under 18 yrs	1727	919	7.9	6.4	71.5	67.9
Male hhlder, no wife present	892	940	4.1	6.6	100.0	100.0
With own children						
under 18 yrs.	416	563	1.9	3.9	46.6	59.9

SOURCE: U.S. Bureau of the Census PC80-1-B54 1980 Table 15; PC(1) B54 1970 Table 11. Of married-couple families in 1970, 9,413, or 78 percent, had children under 18 years living with them, compared to 68 percent of the female-headed families. These percentages changed to 75 percent and 72 percent, respectively, in 1980.

Persons 65 years and over made up almost 3 percent of the population in 1980 (Table 3.14). Over 88 percent of Guam's elderly lived in family households, with 52 percent being the householder or their spouse.

Table 3.14 Persons 65 and Over by Household Type and Relationship: 1980

	Number	Percent
Persons 65 and over	2985	100.0
In family households	2638	88.4
Householder	1106	37.1
Spouse	444	14.9
Other relative	1069	35.8
Nonrelative	19	.6
In nonfamily households	290	9.7
Male householder	121	4.1
Female householder	153	5.1
Nonrelative	16	.5
In Group quarters	57	1.9
Inmate of institution	2	.1
Other	55	1.8

SOURCE: U.S. Bureau of the Census Summary Tape File 1A 1980, Table 15 and Table 20.

In 1980, 36 percent of the elderly lived with relatives and just less than 1 percent stayed with nonrelatives in family households. Of the remaining elderly, 10 percent were residing in nonfamily households, and 2 percent were institutionalized. There are no statistics about the elderly for Census years prior to 1980,

so it is not known whether these figures reflect large increases in the proportions of the population over 65 who are living outside the family household, or who have been institutionalized. Local experts in the area of gerontology expect the proportions of elderly who have been institutionalized to increase by 1990, after the opening of the island's first senior care home (St. Dominic's) in 1987 (Guam Health Planning and Development Agency 1985: 227-37; 1987). St. Dominic's has a capacity of 60 beds, 36 of which were immediately filled with elderly needing constant care when the Intermediate Care Facility of the Guam Memorial Hospital was closed in 1987; an additional 4 beds have been filled in 1988.

(3) SUMMARY

Guam is an island with households in transition. The average household size has decreased from over 5 persons per household to just over 4 persons over the last 40 years, and the distribution of those households has moved from the Central region to the North. The southernmost area has consistently had the largest average size of households, but the proportion of households located there has been steadily decreasing since 1960.

Household and family composition has also changed over the years. Comparisons made with data from the last 2 censuses show that the proportion of female headed families is increasing, while the proportion of married couple families is decreasing. The percentage of married couple families with children under the age of 18 years has decreased slightly, and a parallel increase of female headed families with children under 18 has occurred. This change seems to show a shift from the island tradition of an extended family to one that, whether by divorce or premarital childbearing, is headed by a single female. The great majority of Guam's elderly were living in family households in 1980, either in their own household or with relatives.

Should patterns in household size, composition and distribution be consistent, the island may expect in the future to have smaller households, with more single female heads of households, and a continued shift to residences located in the Northern region. The next Census will allow us to see if these patterns continued from 1980 to 1990.

d) MARITAL STATUS CHARACTERISTICS OF THE POPULATION

Marriage is an important indicator of socio-cultural patterns in a society, particularly because the age pattern of marriage affects fertility. Usually, there is a relationship between age at first marriage and the number of children a woman will have, partly because earlier marriage gives more time for births and younger women tend to be more fertile than older women.

The marital status classification referred to the status at the time of enumeration. Persons classified as "now married" included those who had been married only once and had never been widowed or divorced and those currently married persons who remarried after having been widowed or divorced. Consensually married persons were those living in a marital union without a civil or religious matrimonial contract and were included with those classified as now married; they were reported separately as "consensually married". Persons reported as "separated" were those living apart because of marital discord, with or without a legal separation. Persons whose only marriage had been annulled, and all persons under 15 years old were classified as "never married." All persons classified as "never married" are shown as "single" here.

When marital status was not reported, it was allocated according to the relationship to householder and sex and age of the person.

CHARACTERISTICS OF MARITAL STATUS

Between 1930 and 1980 the percentage of males who were never married decreased, but most of the decrease came between 1940 and 1960, and the data are obscured, once again, by the presence of the military and their dependents on island (Table 4.1). Between 1960 and 1980 there was almost no change in the proportion of males 15 years and over who had never married, about 1 in 3 males. The data for 1950 are clearly affected by the huge presence of the military in that year, many of whom had never married.

The percentage of married males showed the same fluctuations as the never married, but in the opposite direction. Between 1960 and 1980 about 6 in every 10 males were married. The percentage divorced remained small, but has been increasing with each census. On the other hand, the percentage of widowers, which was about 5 percent in 1930 and 1940, decreased to about 1 percent in 1960, and has remained there.

Table 4.1 Marital Status for Males: 1930 to 1980

Marital Status	1980	1970	1960	1950	1940	1930
Males, 15 yrs & over	36,408	30,978	25,319	32,572	6,158	5,673
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Never married	33.3	34.1	34.4	55.1	42.4	46.9
Now married	62.2	61.7	61.9	39.7	51.6	47.8
Consensually married	1.6	.8	...	...	...	...
Separated	.9	.6	.6	(NA)	(NA)	(NA)
Divorced	2.3	2.2	1.5	(NA)	.4	.4
Widowed	1.4	1.3	1.4	(NA)	5.6	4.8

Note: 1970 and 1950 data for persons 14 years and over; for 1930 to 1950 "separated" included in "now married"; for 1950, 1698 widowed/divorced males included in total.

SOURCE: U.S. Bureau of the Census Decennial Census Reports.

The percentage of never married females has not seen the dramatic changes the males experienced because few of the females were in the military (Table 4.2), for all censuses through the years, the percentage of never married females has been less than comparable males, partly because of the large number of single males in the military. There has been a general downward trend in the percentage of never married females, with glitches in 1940 and again in 1970.

The "now married" segment shows the inverse trend, as with the males. The percentage of divorced females remained at 1 percent or less until 1980 when it jumped to more than 3 percent; the percentage of widows also decreased from more than 10 percent in 1930 and 1940 to about 5 percent in 1970 and 1980.

Table 4.2 Marital Status for Females: 1930 to 1980

Marital Status	1980	1970	1960	1950	1940	1930
Females, 15 yrs & over	32,599	22,241	14,483	11,561	6,298	5,065
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Never married	26.2	29.6	23.1	31.5	39.0	35.7
Now married	63.4	63.4	67.7	59.0	50.3	53.0
Consensually married	1.6	.7	...	...	...	...
Separated	1.3	.9	1.1	(NA)	(NA)	(NA)
Divorced	3.5	1.1	1.1	(NA)	.3	.4
Widowed	5.5	4.9	6.8	(NA)	10.3	10.8

Note: 1970 and 1950 data for persons 14 years and over; for 1930 to 1950 "separated" included in "now married; for 1950, 1091 widowed/divorced females included in total.

SOURCE: U.S. Bureau of the Census Decennial Census Reports.

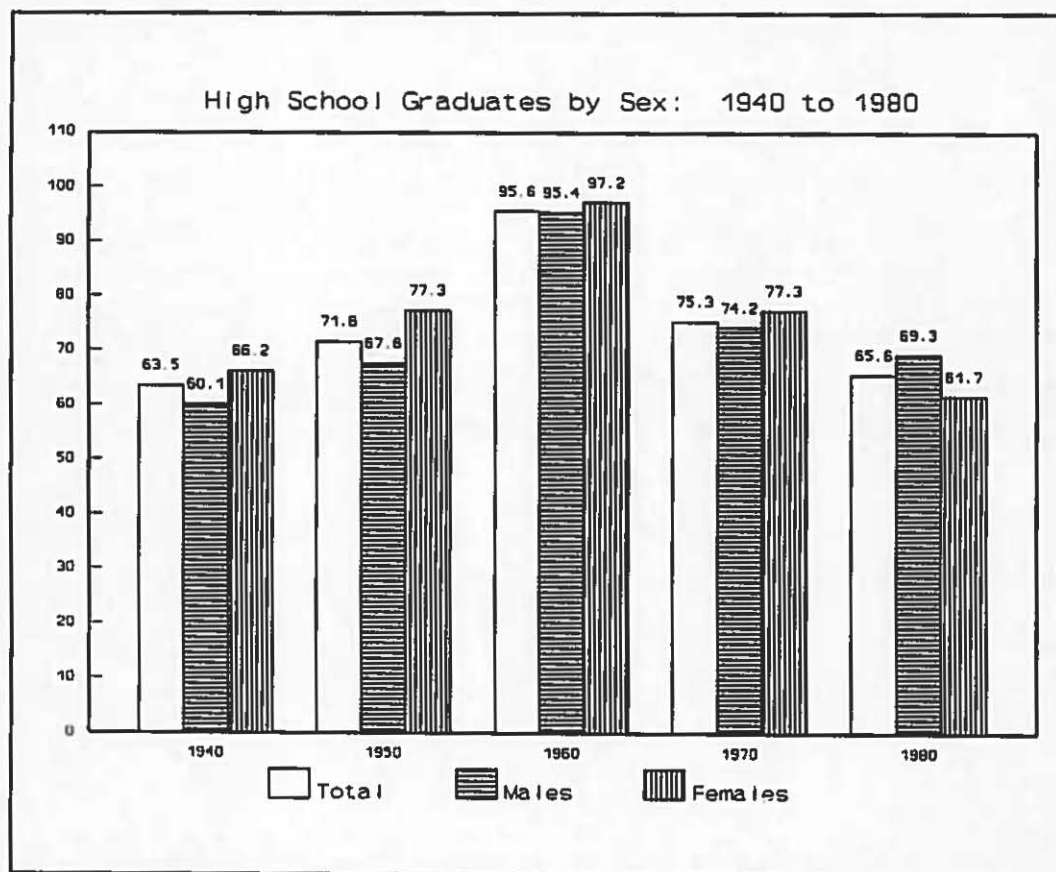
e) EDUCATIONAL ATTAINMENT CHARACTERISTICS OF THE POPULATION

Table 9.11 Educational Attainment: 1940 to 1980

School Attainment	1980	1970	1960	1950	1940
Persons 25 yrs & over	100.0	100.0	100.0	100.0	100.0
No school	100.0	100.0	100.0	100.0	100.0
Elementary: 1 to 6 years	98.4	99.5	100.0	99.5	99.2
7 and 8 years	84.8	91.8	99.5	90.3	89.9
High School: 1 to 3 years	78.7	87.1	99.2	84.8	84.2
4 years	65.6	75.3	95.6	71.6	63.5
College: 1 to 3 years	17.6	21.7	18.0	22.9	13.3
4 years	17.6	21.7	18.0	22.9	13.3
5 or more years	6.4	8.2	8.1	8.5	2.9

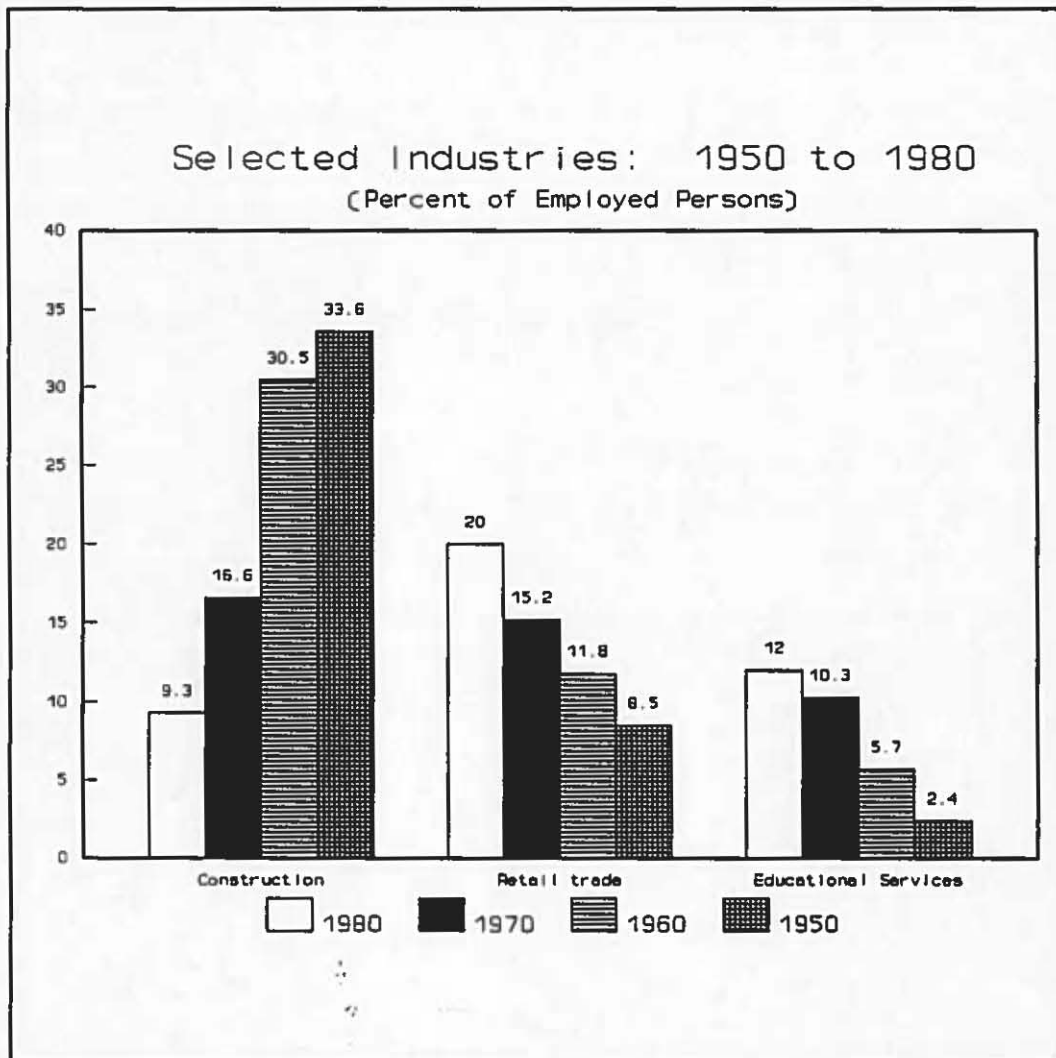
SOURCE: U.S. Bureau of the Census Decennial Reports.

Figure 9.2 High School Graduates by Sex: 1940 to 1980
(Cumulative Percent)



f) EMPLOYMENT CHARACTERISTICS OF THE POPULATION

Figure 11.1 Selected Industries: 1950 to 1980 (Percent of Employed Persons)



The 18,994 employed males 16 years and over in 1980 made up 58 percent of the total work force. Of these, the largest proportion was in public administration, 21 percent. That is approximately 1 in every 5 employed males in 1980 was in the public sector. Although still a large proportion, the percentage of males employed in public administration steadily decreased, from 28 percent in 1960 to 21 percent in 1980. The second largest industry category for males was in retail trade, which employed 15 percent of the males in 1980, an increase from the 11 percent in this category in 1970. Construction followed closely as the third largest employer, accounting for 15 percent in 1980. However, unlike retail trade, this figure decreased significantly from 23 percent to 1970. Finance, insurance, and real estate more than doubled from 1.5 percent in 1970 to 3.2 percent in 1980, as did personal, entertainment, and recreational services, which increased from 2.4 to 5.2 percent during the decade.

Table 11.2 Industry by Percent High School Graduates by Sex: 1980

Industry	Numbers			Percent HS Graduate		
	Total	Male	Female	Total	Male	Female
Employed 25 yrs and over	26,347	15,835	10,512	71.5	67.6	77.3
Ag, fishing, forestry	225	188	37	53.8	51.1	67.6
Construction	2,694	2,537	157	57.6	56.1	82.2
Manufacturing	1,343	1,124	219	69.5	67.2	81.3
Communications, transport. . . .	2,802	2,310	492	67.3	62.9	87.6
Wholesale trade	581	441	140	82.1	80.7	86.4
Retail trade	4,711	2,040	2,671	67.0	68.3	66.0
Finance, ins & real estate . .	1,188	517	671	90.2	87.3	92.4
Business and repair	891	714	177	70.5	68.2	79.7
Personal, ent, recreation	1,547	701	846	60.1	68.0	53.4
Professional and related	5,450	1,786	3,664	83.3	81.6	84.1
Public Administration	4,906	3,470	1,436	72.1	67.9	82.3
Subsistence	9	7	2	33.3	28.6	50.0

SOURCE: U.S. Bureau of the Census 1980 PC80-1-C/D54, Table 44

Figure 11.3 Industry by Percent High School Graduates: 1980

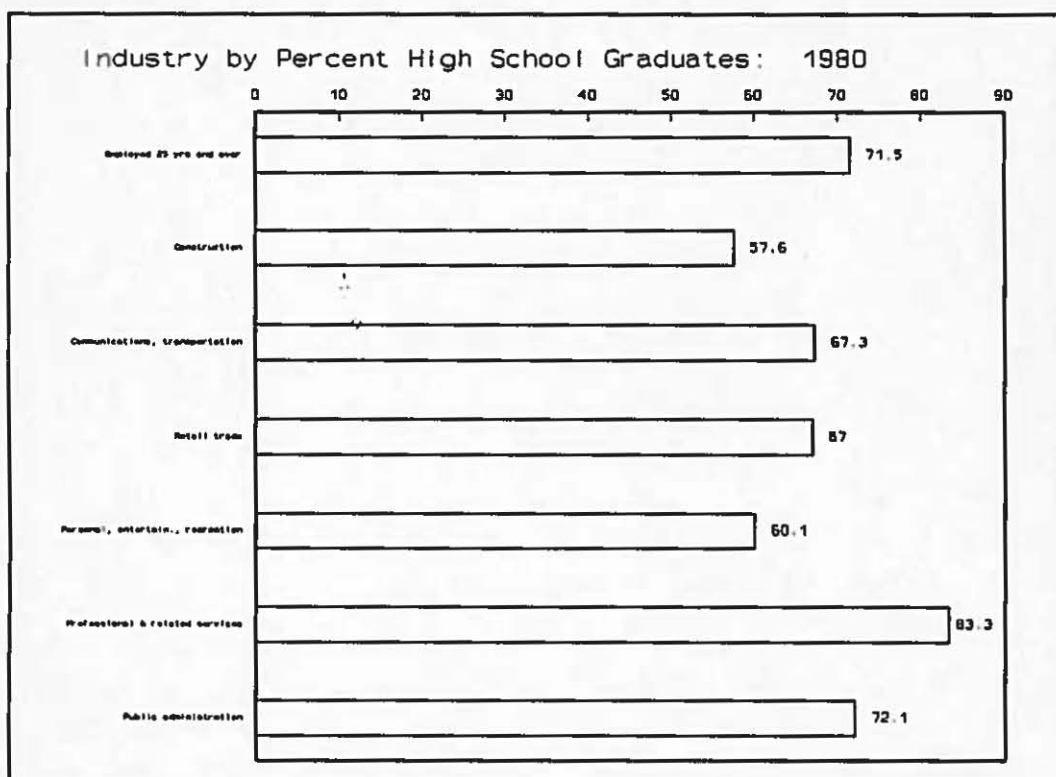
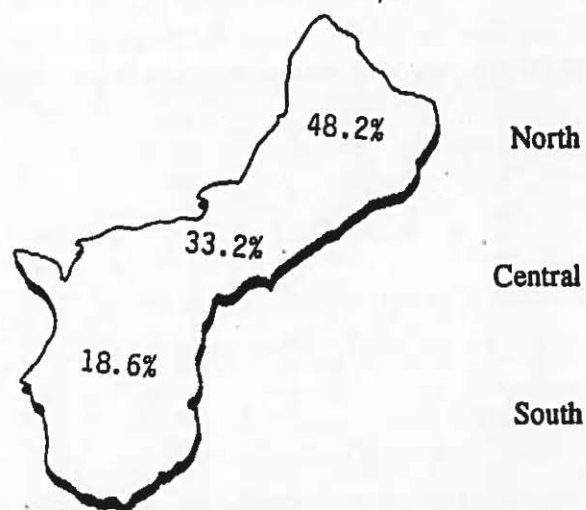


Table 11.04 shows the employment figures by industry and region. Out of the total labor force 16 years and over, 15,747 workers came from the Northern region, 10,851 from the Central region, and 6,094 from the Southern region. The three largest industry categories for the North were retail trade (23 percent of the employed workers living there), professional and related services (16 percent), and public administration (13 percent). The three largest for Central were in professional and related services (22 percent), public administration (21 percent), and retail trade (18 percent). The largest categories for Southern region workers were public administration (24 percent), professional and related services (24 percent), and retail trade (16 percent).



Employment by Region

Table 11.04 Industry by Region: 1980

Industry	Total	North	Central	South
Employed 16 yrs and over . . .	32,692	15,747	10,851	6,094
Percent	100.0	100.0	100.0	100.0
Agriculture, fishing, mining	.9	.8	1.0	1.2
Construction	9.3	11.1	8.4	5.8
Manufacturing	4.9	4.6	4.7	5.9
Nondurable goods	2.5	2.7	2.5	1.8
Durable goods	2.4	1.9	2.2	4.1
Transportation	5.8	5.6	5.2	7.4
Communications	4.4	3.8	4.9	5.1
Wholesale trade	2.3	2.8	2.2	1.3
Retail trade	20.0	23.3	17.5	16.1
Finance, insurance & real estate	4.8	5.0	5.4	3.3
Business and repair	3.6	4.0	3.6	2.6
Personal, entertain., recreational	6.4	9.5	4.1	2.9
Professional and related services	19.6	16.5	21.7	23.8
Health	4.1	4.1	4.3	3.6
Educational services	12.0	9.2	13.5	16.6
Other professional services	3.5	3.2	3.9	3.7
Public Administration	17.9	13.1	21.1	24.5
Subsistence	.0	.0	.1	.0

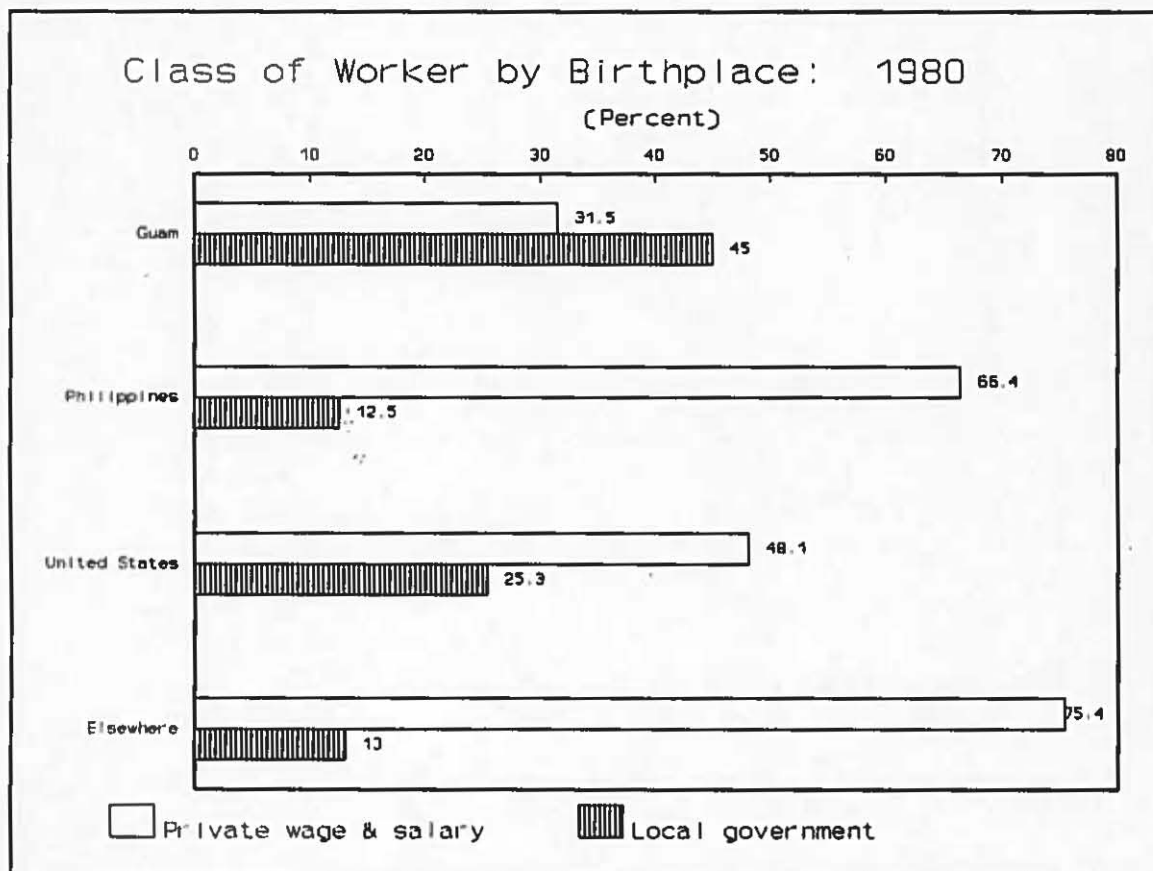
SOURCE: U.S. Bureau of the Census 1980 Summary Tape File 3A, Table 65

Table 11.5 Class of Worker by Birthplace: 1980

Class of Worker	Numbers				Total	Percent			
	Guam	Phil- ppns	USA	Ot- her		Guam	Phil- ppns	USA	Ot- her
Empld, 16+ yrs	13001	9188	5636	4867	100.0	100.0	100.0	100.0	100.0
Prvt wage and sal . .	4092	6100	2713	3670	50.7	31.5	66.4	48.1	75.4
Federal government .	2751	1686	1231	333	18.4	21.2	18.4	21.8	6.8
Local government . .	5847	1151	1427	631	27.7	45.0	12.5	25.3	13.0
Self-employed	289	244	261	226	3.1	2.2	2.7	4.6	4.6
Unpaid family	12	7	4	3	.1	.1	.1	.1	.1
Subsistence	10	0	0	4	.0	.1	0.0	0.0	.1

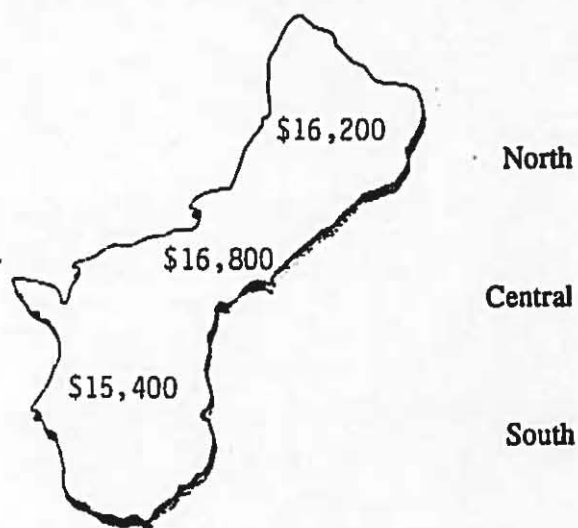
SOURCE: U.S. Bureau of the Census PC80-1-C/D54 1980 Table 28

**Figure 11.6 Class of Worker by Birthplace: 1980
(Percent)**



**g) INCOME
CHARACTERISTICS**

The median household income for Guam in 1979 was \$15,752 (Table 12.1). The median family income was \$16,203 and median income of unrelated individuals was \$6,713. The median income, again, is the measure of central tendency, dividing the number of income observations in half, and is useful for comparing the 3 regions. Of the three regions, the Northern and Central household income medians were slightly higher than the overall median; these regions included 11 villages above the median. The median household income for the Southern region was \$15,357. Dededo had the highest median income of the Northern villages at \$16,873. In the Central region, Piti had the highest median income at \$19,194 and Agana the lowest at \$12,794. The villages of Talofofo and Yona in the Southern region had the highest household medians of \$17,329 the \$18,858 respectively. Santa Rita was the lowest at \$13,614.



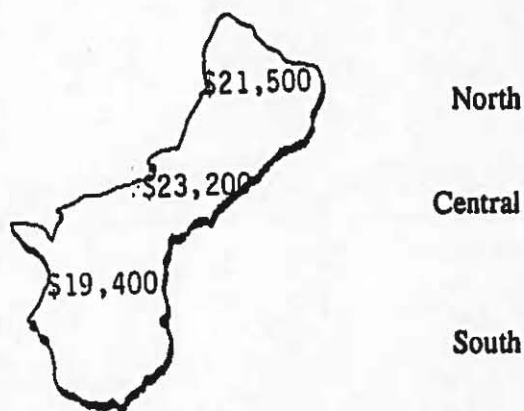
Median Household Income in 1979

Table 12.1 Median Household, Family, and "Unrelated" Income by Election District: 1980

Election District	Median Household Income	Median Family Income	Median Income of Unrelated Individuals
Guam	\$15,752	\$16,203	\$6,713
Northern	16,209	16,557	7,012
Dededo	16,873	17,131	7,212
Tamuning	15,091	15,615	8,624
Yigo	14,525	14,644	6,365
Central	16,786	17,579	6,560
Agana	12,794	15,000	7,531
Agana Heights	16,728	17,868	6,735
Asan	18,321	18,976	7,600
Barrigada	15,916	16,391	6,136
Chalan Pago/Ordot	16,517	16,974	6,125
Mangilao	16,062	16,734	7,567
Mongmong-Toto-Maite	14,874	15,826	7,603
Piti	19,194	20,475	6,516
Sinajana	16,418	17,938	5,500
Southern	15,357	15,738	6,422
Agat	15,495	15,907	6,333
Inarajan	15,455	15,951	2,250
Merizo	15,659	16,786	7,000
Santa Rita	13,614	13,705	6,394
Talofofo	17,329	17,608	8,000
Umatac	15,686	16,055	3,000
Yona	18,858	19,720	7,792

SOURCE: U.S. Bureau of the Census Summary Tape File 3A, Tables 69, 74 and 82

Median and mean comparisons show that the median household income for Guam in 1979 (\$15,752) was somewhat lower than the mean household income of \$21,595 (Table 12.2). The Central region which had a higher mean household income than the Northern and Southern regions, was also higher than the overall mean household income for Guam. Villages having the highest mean household income were Tamuning in the North, with a high of \$24,662, Agana in Central (\$29,688) and Yona in the Southern region (23,302). A majority of the election districts were higher than the overall mean household income of \$2,595 (Table 12.2). Umatac had the lowest mean household income at \$17,877.



Mean Household Income in 1979

Mean family income (\$17,089) and mean income of unrelated individuals (8,461) did not vary as much over the regions and remained close to the overall mean for Guam (Table 12.2). The village of Yona had a much higher mean family income at \$20,071 compared to the Southern region average of \$17,171. For income of unrelated individuals, the highest mean was for the village of Barrigada at \$10,638. The mean income is the value obtained by adding total income reported and dividing by the number of observations. As always in comparing the income distributions, the mean value is more effective by the addition of extreme cases than the median, so the median is the standard measure.

Table 12.2 Mean Household, Family, and "Unrelated" Income by Election District: 1980

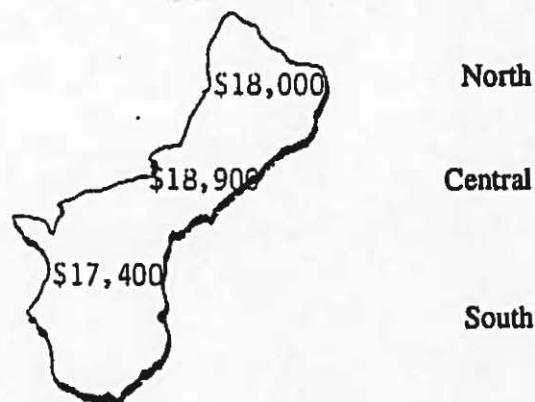
Election District	Median Household Income	Median Family Income	Median Income of Unrelated Individuals
Guam	\$21,595	\$17,089	\$ 8,461
Northern	21,533	16,733	9,050
Dededo	20,664	18,445	8,079
Tamuning	24,662	14,697	10,310
Yigo	19,120	16,544	7,814
Central	23,214	17,547	8,194
Agana	29,688	15,122	9,215
Agana Heights	24,056	17,170	9,163
Asan	25,593	19,239	10,638
Barrigada	22,267	19,260	6,489
Chalan Pago/Ordot	20,917	17,977	7,391
Mangilao	22,302	16,456	8,618
Mongmong-Toto-Maite	23,447	16,198	9,041
Piti	26,934	19,342	8,297
Sinajana	22,688	17,089	7,625
Southern	19,424	17,171	7,574
Agat	19,121	16,275	6,729
Inarajan	18,585	16,375	6,418
Merizo	19,839	16,515	8,319
Santa Rita	17,942	16,594	7,417
Talofofo	20,477	17,055	8,484
Umatac	17,877	16,646	6,593
Yona	23,302	20,071	9,421

SOURCE: U.S. Bureau of the Census Summary Tape File 3A, Tables 9, 10, 70, 77, 82, and 83.

(1) TYPES OF INCOME

Table 12.3 shows comparable data on type of family income by region for the year before the census for the 1970 and 1980 decennial censuses. The dollar amounts are in 1979 dollars, that is, the 1969 amounts have been adjusted for inflation.

Between 1969 and 1979 the amount of money income earned from wages and salaries on Guam increased by a very small amount, from \$17,900 to \$18,200. Central region experienced the biggest increase in real income, from \$17,500 in 1969 (less than the mean for Guam as a whole) to \$18,900 in 1979. Southern region also experienced a real gain in income, from \$16,800 in 1969 to \$17,400 in 1979, an amount that was still about \$800 less than the mean for all of Guam. Families in the Northern region, on the other hand, had a decrease of about \$1000, from \$19,000 to \$18,000 during the decade.



Mean Wage and Salary Income in 1979

Non-farm income was about the same in 1969 as in 1979, although both Northern and Southern regions saw substantial decreases in mean non-farm income, while Central region had an even larger increase in this type of income, averaging almost \$5,000 for those families receiving this type of income. On the other hand, for all of Guam, farm income decreased precipitously. While the average farm family in 1969 received about \$5,200 for farm products, by 1979 this amount had decreased to only 2,000, more than a 50 percent decrease in 1979 dollars. Data by region were not available since there were too few farmers in the election districts (there were 93 families with farm income in 1969).

The amount of social security income increased for Guam, and for each of the regions between 1969 and 1979, while public assistance income decreased for Guam, and Central region. Families in Central region in 1979 receiving public assistance received about \$1000 less than those receiving assistance in 1969, although the number and composition of the families changed during the decade. Finally, the amount of "other" income increased for Guam and for the regions between 1969 and 1979.

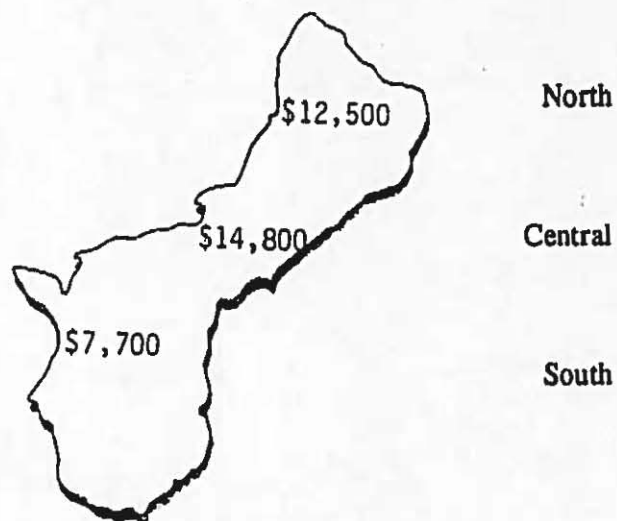
Table 12.3 Mean Income by Type of Income in 1969: 1970 (Values in 1979 dollars)

Election District	Wage & Salary	Non-farm	Farm	Social Security	Public Assist.	All Other
1969						
Guam	\$17,927	\$12,225	\$5,154	\$3,087	\$2,639	\$4,075
Northern	18,960	13,582	(NA)	3,141	2,055	3,918
Central	17,509	10,014	(NA)	3,251	3,207	4,432
Southern	16,824	8,953	(NA)	2,862	2,623	3,685
1979						
Guam	18,195	12,556	2,049	3,342	2,344	5,758
Northern	18,023	12,526	2,367	3,210	2,247	6,223
Central	18,945	14,827	2,444	3,488	2,221	5,692
Southern	17,442	7,743	1,353	3,321	2,612	5,116

SOURCE: U.S. Bureau of the Census, PC(1)-B54, 1970, Table 16, and Summary Tape File 3, Tables 71 and 72.

The wage and salary category had the highest mean incomes reported, showing Guam's strong private sector and government sector during 1979 (Table 12.4). The mean income from wages and salary was \$18,195. The highest mean occurred in the Central region at \$18,945, with Piti being the village having the highest mean at \$22,318. While the Southern region mean for wage and salary was \$17,442, the village of Yona was the highest at \$20,802.

Non-farm income was second to wages and salary with a mean income of \$12,556. Nonfarm self-employment income includes net income less expenses derived from a business enterprise or business activity. The majority of business activities fall in the retail, professional and related services and public administration area. Central region had the highest mean non-farm income at \$14,827 compared to the overall average of \$12,556. The village of Mongmong-Toto-Maite had the highest non-farm income at \$21,845. (The key business categories in this particular region were in the professional and related services, public administration, and particularly, retail trade, all of which produce relatively high incomes). Southern villages had a mean of \$7,743. The majority of income earnings fell in the public administration category, professional and related services and retail trade. A total of 14 of the 19 villages fell below the overall non-farm average.



Mean Non-Farm Income in 1979

Table 12.4 Mean Income by Type of Income in 1979: 1980

Election District	Wage & Salary	Non-farm	Farm	Interest	Social Sec.	Publ. Asst.	All Other
Guam	\$18,195	\$12,556	\$2,049	\$2,235	\$3,342	\$2,344	\$5,758
Northern	18,023	12,526	2,367	1,955	3,210	2,247	6,223
Dededo	18,605	9,484	1,841	1,590	3,259	2,442	6,292
Tamuning	17,946	15,523	2,798	2,884	2,920	1,975	6,272
Yigo	16,945	10,136	2,442	1,398	3,732	2,017	5,897
Central	18,945	14,827	2,444	2,893	3,488	2,221	5,692
Agana	19,742	11,726	498	7,190	3,163	1,137	6,104
Agana Hts.	18,450	7,484	15,589	3,103	3,774	2,033	6,364
Asan	21,207	9,185	2,192	2,341	2,940	2,534	6,213
Barrigada	19,472	16,811	711	2,428	3,504	2,202	4,942
Chalan Pago/Ordot	18,797	16,902	517	2,805	3,975	2,672	5,984
Mangilao	18,161	14,875	1,465	2,382	3,506	2,736	5,085
Mong-Toto-Maite	17,726	21,845	985	3,426	3,381	1,830	6,072
Piti	22,318	16,524	2,905	1,696	3,135	1,650	6,978
Sinajana	18,383	10,801	822	3,936	3,303	1,831	5,006
Southern	17,442	7,743	1,353	1,886	3,321	2,612	5,116
Agat	17,424	8,976	923	2,581	3,533	2,412	5,523
Inarajan	16,305	10,330	859	897	3,197	2,534	5,029
Merizo	16,186	7,155	1,400	1,062	3,063	2,555	5,688
Santa Rita	16,493	6,203	752	1,228	3,153	2,513	4,739
Talofofo	17,885	10,477	3,694	2,503	3,663	2,882	6,169
Umatac	15,544	5,165	318	2,692	3,880	2,231	6,360
Yona	20,802	8,069	1,505	4,887	3,126	2,834	4,427

SOURCE: U.S. Bureau of the Census Summary Tape File 3A, Tables, 71 and 72.

The mean income for farming activities in 1979 was \$2,049. Farming practices have shown some erratic patterns in the past which to some extent continue today (See the discussion of Agricultural censuses in Chapter 11). Table 12.4 shows Agana heights having the highest mean income at \$15,589, which is 661 percent higher than the overall mean farm income. Several conclusions can be drawn as to how this income reporting can occur. Since place of residence and actual farm sites are not distinguished by census reports, although the South would be expected to have the majority of farms, since persons are reported where they live rather than where they farm, this assumption may not hold true in the case of farm self-employment income. Agana had the lowest mean farm income at \$498. The village of Talofofo was second with a mean income of \$3,694 and Tamuning third at \$2,798. It is true, however, that the Southern district seems to be experiencing a resurgence in farming activities which may eventually be reflected in the net money income earnings and farm size. Some changes in farming practices have been seen in farm management, particularly in partnership arrangements which allow farmers and part-time farmers an opportunity to expand and share common resources and interest.

Mean interest income in 1979 was \$2,235, with Agana having the highest village mean (\$7,190) and Yona being second (\$4,887). No comparative data for 1969 were available; presumably interest income

was included in the "other" category, which is even more than that shown in Table 12.4. As financial services and private investments improve, interest earnings may continue to show some dramatic shifts in the regions. With the advent of foreign capital, manifested in real estate acquisition, local land owners who sell property at increased values, to an extent, place themselves in a higher level of disposable income. Thus investment interests in financial services increase and investment brokers accommodate the trends in capital earned through investment, both local and foreign. Net income from rental of property also continues to increase due to the competitiveness of Guam's real estate market. However, real estate is finite and restricted to available land and infrastructure resources; interest earnings become subjected to changes in the economy and may or may not be a major factor in the types of income reported.

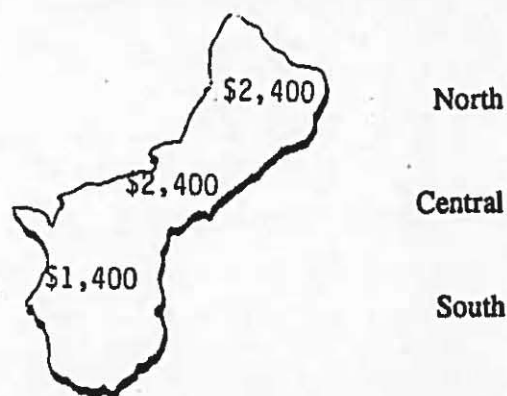
The mean social security income reported in 1979 was \$3,342. As noted earlier, this figure was about 10 percent more than the 1969 figure; because Guam has a relatively young population, the full impact of social security income has yet to be felt. With an aging population, however, the elderly will become more dependent on pension and survivor benefit earnings. Chamorros currently represent the bulk of potential recipients of Guam's welfare assistance programs. Although the traditional way of accommodating Guam's elderly within the extended family structure remains, planning for future elderly accommodations and services must exist concurrently. Although only 3 percent of the population was 65 years or older in 1980, the proportion is likely to increase as the population ages. Also, the Micronesians whose political status allows them to migrate, will be eligible for Guam's programs. These factors may become concerns as the various sub-populations move into the labor force, work, and then retire.

While social security earnings had a higher mean of \$3,342 for Guam, recipients in 1979 for public assistance earned a mean of \$2,344. Public Assistance expenditures totalled \$4,919,283 in 1979. Steady support of Guam's senior citizens will continue in the years ahead particularly in service targeted to elderly with the greatest economic needs. A variety of services will be offered to cater specifically to this group. Health care and welfare recipients will continue to see public assistance programs and services increase.

All other income had a mean of \$5,758 in 1980, with the Northern region having a slightly higher mean of \$6,223. The village with the highest "all other income" mean was Piti, with \$6,978; the lowest mean was in Yona, at \$4,427. All other income is a "catch-all" category, encompassing income from veteran's payments, public or private pensions, alimony, child support, periodic receipts from annuities or trust funds, and other periodic income other than earnings; the recipients of such earnings are not easily stratified by demographic factors such as age and sex. That is, there is no one group that would be more likely to receive such income than another group, as would be the case of social security income or farm income.

Although the mean family income in 1979 was almost \$18,000, there were large differences, depending on the number of workers per family (Table 12.5). There was a direct correlation between the number of workers per family and mean family income. The mean income for families with no workers was \$5,732, and for one worker was \$13,940. However, the mean was \$21,935 for two worker families, \$29,699 for three worker families, and \$37,235 for families with 4 or more workers.

Except for families with no workers, families in the Central region earned more money than those in the North or the South. In two worker families the Central region families earned more than \$2000 more, more than \$3000 more in three worker families, and more than \$5000 more in families with 4 or more workers.



Mean Farm Income in 1979

Table 12.5 Mean Income of Workers in Families in 1979: 1980

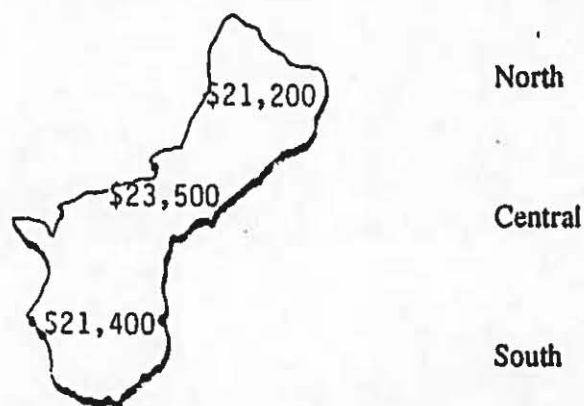
Election District	No Workers	1 Worker	2 Workers	3 Workers	4 Workers
Guam	\$5,732	\$13,940	\$21,935	\$29,699	\$37,235
Northern	6,490	13,911	21,158	28,873	35,266
Central	5,546	14,527	23,530	31,912	40,749
Southern	4,812	13,240	21,369	28,244	35,645

NUMBER OF FAMILIES

Guam	1243	7871	9821	1834	1011
Northern	470	3593	4722	878	446
Central	484	2405	3034	577	348
Southern	289	1873	2065	379	217

SOURCE: U.S. Bureau of the Census Summary Tape File 3A, Tables 79 and 80

There were also differences in family income by workers in families for the election districts. Agana had the highest income for 2 worker families, Asan for 3 worker families, and Barrigada for 4 worker families (Table 12.6).



Mean Income of Two Worker Families

Table 12.6 Mean Income of Workers in Families in 1979: 1980

Election District	No Workers	1 Worker	2 Workers	3 Workers	4 or more Workers
Guam	\$5,732	\$13,940	\$21,935	\$29,699	\$37,235
Northern	6,490	13,911	21,158	28,873	35,266
Dededo	7,439	14,035	20,972	28,369	34,759
Tamuning	5,470	14,422	22,686	29,981	36,081
Yigo	5,748	12,923	19,836	28,596	36,291
Central	5,546	14,527	23,530	31,912	40,749
Agana	5,990	14,478	31,130	28,930	43,734
Agana Heights	8,286	15,824	22,607	31,899	36,029
Asan	6,772	17,231	23,697	36,584	38,771
Barrigada	4,534	13,929	22,977	31,649	49,551
Chalan Pago/Ordot	5,963	14,337	23,430	32,112	37,063
Mangilao	5,920	13,801	22,499	29,974	36,115
Mongmong-Toto-Maite	3,796	14,125	23,220	36,072	42,601
Piti	4,407	17,798	29,741	27,509	35,171
Sinajana	5,949	13,255	23,551	29,179	35,825
Southern	4,812	13,240	21,369	28,244	35,645
Agat	4,444	13,893	22,294	25,333	33,773
Inarajan	4,305	12,007	20,044	25,878	31,453
Merizo	6,476	13,381	22,254	26,672	36,090
Santa Rita	4,535	12,688	19,194	30,156	38,101
Talofofo	4,654	14,132	22,102	29,509	29,833
Umatac	6,652	13,279	19,566	21,965	27,894
Yona	4,893	14,272	26,349	31,801	41,269

SOURCE: U.S. Bureau of the Census Summary Tape File 3A, Tables 79 and 80.

(2) PER CAPITA INCOME

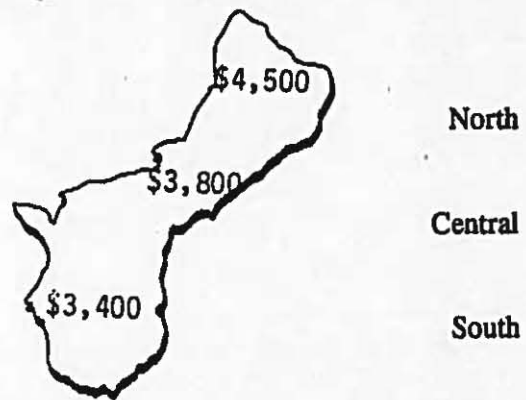
Per capita income is the measure of the average income per person in an area or population and is derived by determining the income of all persons from all sources and dividing by the total number of persons in the area or population. The per capita income on Guam in 1979 as determined by the 1980 census was \$4793 (Table 12.7). The per capita income in the United States for 1979 was \$7,298, so Guam's per capita income was only 66 percent of that for the U.S. In 1969, the per capita income for Guam was \$2008 (\$3,936 in 1979 dollars). Per capita income in the United States for 1969 was \$3,119 (\$6,176 in 1979 dollars). The change in per capita income between 1969 and 1979 was 22 percent.

Table 12.7 Per Capita Income in 1969 and 1979: 1970 and 1980 (Values in 1979 dollars)

Election District	1979		1969	
	Persons	Income	Persons	Income
Guam	105,979	\$4,793	84,996	\$3,976
Northern	47,583	4,871	32,540	4,490
Dededo	23,644	4,297	10,780	4,166
Tamuning	13,580	5,898	10,218	4,960
Yigo	10,359	4,834	11,542	4,378
Central	34,526	5,095	31,266	3,830
Agana	896	6,565	2,119	5,007
Agana Heights	3,284	5,312	3,156	4,493
Asan	2,034	5,791	2,629	4,112
Barrigada	7,756	5,046	6,356	3,162
Chalan Pago/Ordot	3,120	4,044	2,931	2,772
Mangilao	6,840	4,808	3,228	3,716
Mongmong-Toto-Maite	5,245	4,788	6,057	4,768
Piti	2,866	7,029	1,284	2,822
Sinajana	2,485	4,382	3,506	3,257
Southern	23,870	4,200	21,190	3,404
Agat	3,999	3,737	4,308	3,180
Inarajan	2,059	3,295	1,897	2,154
Merizo	1,663	3,796	1,529	2,433
Santa Rita	9,183	4,672	8,109	4,453
Talofofo	2,006	3,747	1,935	2,820
Umatac	732	3,028	813	2303
Yona	4,228	4,631	2,599	2,764

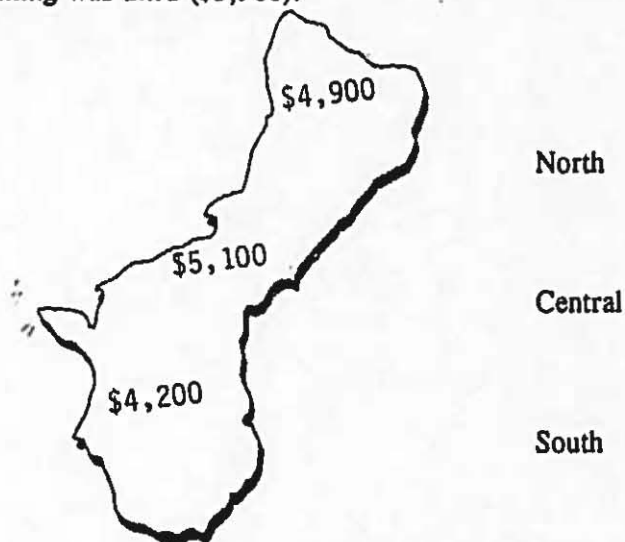
SOURCE: U.S. Bureau of the Census, STF3A, 1980, Table 85, and PC(1)-B54, 1970, Table 16.

Northern region had the highest per capita income in 1969 at \$4,500, about \$500 more than for Guam as a whole. While Central region's per capita was close to the Guam average, the Southern region average was about \$500 less than the Guam average. The \$500 discrepancy for Southern region continued in 1979, but Central region at \$5,100 surpassed Northern region (at \$4,900).



Per Capita Income in 1969

In 1969, Agana and Tamuning had the highest per capita incomes (\$5,000). Mongmong-Toto-Maite was third highest at \$4,800. In 1979, Piti had the highest per capita income at \$7,000, almost three times its 1969 value. Since Piti's dependency ratio (the ratio of dependents to workers) was only 30, compared to about 60 for the territory as a whole, this high value is not too surprising. The large number of military personnel probably contributed to the higher value. Agana continued to have the second highest per capita rate (\$6,565), and Tamuning was third (\$5,900).



Per Capita Income in 1979

(3) PERSONAL INCOME

Tables on income of persons by sex show some differences in income received by males and females. Of the 36,408 males 15 years and over, 31,486 (86 percent) had income in 1979 (Table 12.8 and Figure 12.1). For females, only 19,481 of the 32,599 (60 percent) had income. The median for all individuals in 1979 was \$8,392: \$9,926 for males and \$6,133 for females.

The mean income data were similar, but were slightly higher for males. The mean income for all individuals for 1979 was \$9,965, \$11,835 for males and \$6,942 for females. Of the total females with income, 16 percent fell within the \$7,000 to \$9,999 category compared to 19 percent for the males. The largest category for males (23 percent) was the \$10,000 to \$14,999 category.

Table 12.8 Income of Persons in 1979 by Sex: 1980

Income	Numbers			Percent		
	Total	Males	Females	Total	Males	Females
Total	69,007	36,408	32,599	...	...	...
With Income	50,967	31,486	19,481	100.0	100.0	100.0
\$1 to \$499/loss	1,691	617	1,074	3.3	2.0	5.5
\$500 to \$999	2,162	1801	1,361	4.2	2.5	7.0
\$1000 to \$1999	2,842	1,076	1,766	5.6	3.4	9.1
\$2000 to \$2999	2,320	857	1,463	4.6	2.7	7.5
\$3000 to \$4999	4,460	1,892	2,568	8.8	6.0	13.2
\$5000 to \$6999	7,453	4,574	2,879	14.6	14.5	14.8
\$7000 to \$9999	9,690	6,075	3,615	19.0	19.3	18.6
\$10000 to \$14999	10,188	7,237	2,951	20.0	23.0	15.1
\$15000 to 24999	7,680	6,115	1,565	15.1	19.4	8.0
\$25000 or more	2,481	2,242	239	4.9	7.1	1.2
Median	\$8,392	\$9,926	\$6,133	...	...	...
Mean	\$9,965	\$11,835	\$6,942	...	...	...

SOURCE: U.S. Bureau of the Census PC80-1-C/D54, Table 46

Table 12.9 shows median and mean income by birthplace. About 64 percent of those earning income in 1979 were not born on Guam, reflecting certain programs such as the construction industry's use of contract workers having H-2 status. These same workers increased the mean income for non-Guam born workers to \$10,219 compared to the \$9,504 for workers with income who were born on Guam. Other influences on these figures include the military as well as firms having expatriates to run corporate subsidiary operations.

Figure 12.1 Mean and Median Income by Sex: 1980

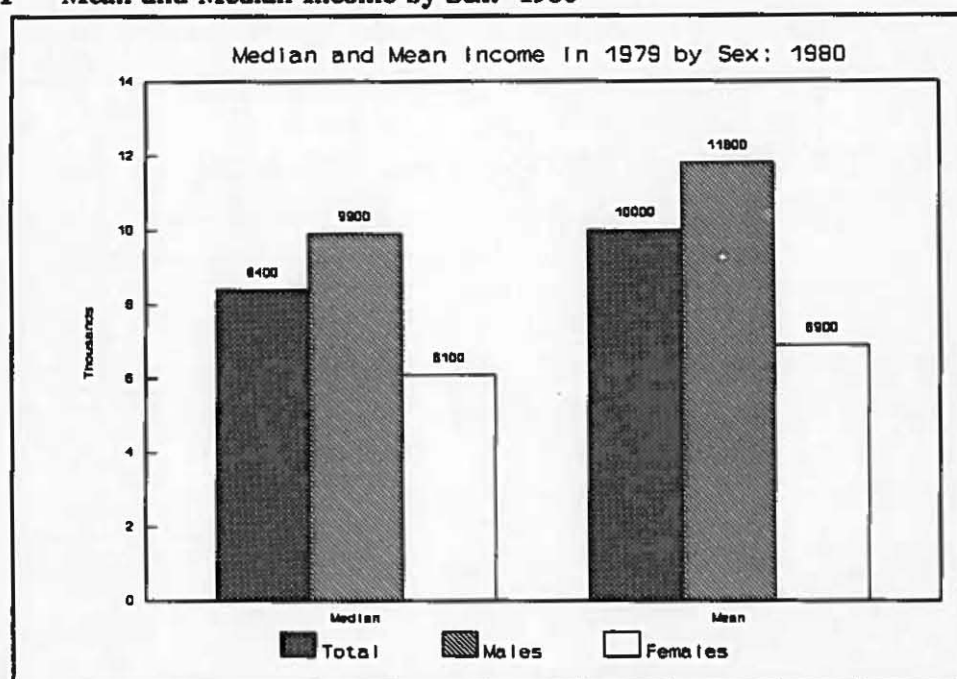


Table 12.9 Income of Persons in 1979 by Birthplace: 1980

Income	Birthplace			Percent		
	Total	Guam	Not-Guam	Total	Guam	Not-Guam
Total	69,007	26,944	42,063	...	...	...
With Income . . .	50,967	18,085	32,882	100.0	100.0	100.0
\$1 to \$499/loss	1,691	787	904	3.3	4.4	2.7
\$500 to \$999	2,162	1,161	1,001	4.2	6.4	3.0
\$1000 to \$1999	2,842	1,308	1,534	5.6	7.2	4.7
\$2000 to \$2999	2,320	934	1,386	4.6	5.2	4.2
\$3000 to \$4999	4,460	1,649	2,811	8.8	9.1	8.5
\$5000 to \$6999	7,453	1,685	5,768	14.6	9.3	17.5
\$7000 to \$9999	9,690	3,181	6,509	19.0	17.6	19.8
\$10000 to \$14999	10,188	3,823	6,365	20.0	21.1	19.4
\$15000 to 24999	7,680	2,927	4,753	15.1	16.2	14.5
\$25000 or more	2,481	630	1,851	4.9	3.5	5.6
Median	\$8,392	\$8,510	(NA)	...	...	...
Mean	\$9,965	\$9,504	\$10,219	...	...	...

SOURCE: U.S. Bureau of the Census PC80-1-C/D54, Table 47

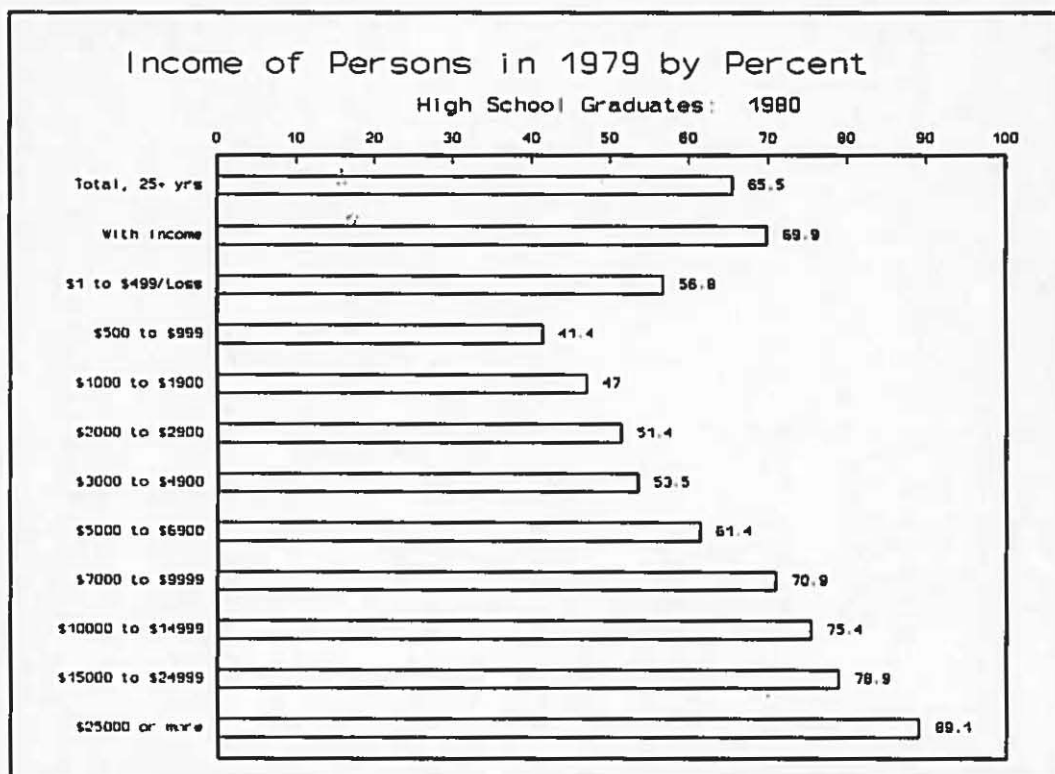
About 7 in every 10 persons 25 years and over and receiving income in 1979 were high school graduates (Table 12.10 and Figure 12.2). The percentage for males and females was the same. Except for the very low income levels (which may have been affected by low numbers), there was a direct correlation between income level and percent high school graduate. These trends held for both males and females.

Table 12.10 Income of Persons in 1979 by Percent High School Graduates: 1980

Income	Numbers			Percent High School Grads		
	Total	Males	Females	Total	Males	Females
Total 25+ yr	46,906	24,540	22,366	65.6	69.2	61.6
With Income . .	37,618	23,474	14,144	69.9	70.3	69.2
\$1 to \$499/loss	717	153	565	56.8	49.8	58.7
\$500 to \$999	1,038	271	767	41.4	36.9	43.0
\$1000 to \$1999	1,478	1,336	142	47.0	46.9	48.3
\$2000 to \$2999	1,351	445	906	51.4	48.5	52.8
\$3000 to \$4999	2,764	1,025	1,739	53.5	48.1	56.7
\$5000 to \$6999	3,649	1,744	1,905	61.4	58.9	63.7
\$7000 to \$9999	7,350	4,535	2,815	70.9	69.8	72.7
\$10000 to \$14999	9,352	6,700	2,652	75.4	70.9	86.7
\$15000 to \$24999	7,479	5,949	1,530	78.9	75.3	92.9
\$25000 or more	2,440	2,216	224	89.1	90.0	80.4

SOURCE: U.S. Bureau of the Census PC80-1-C/D54, Table 49

**Figure 12.2 High School Graduates by Income Level: 1980
(Percent)**



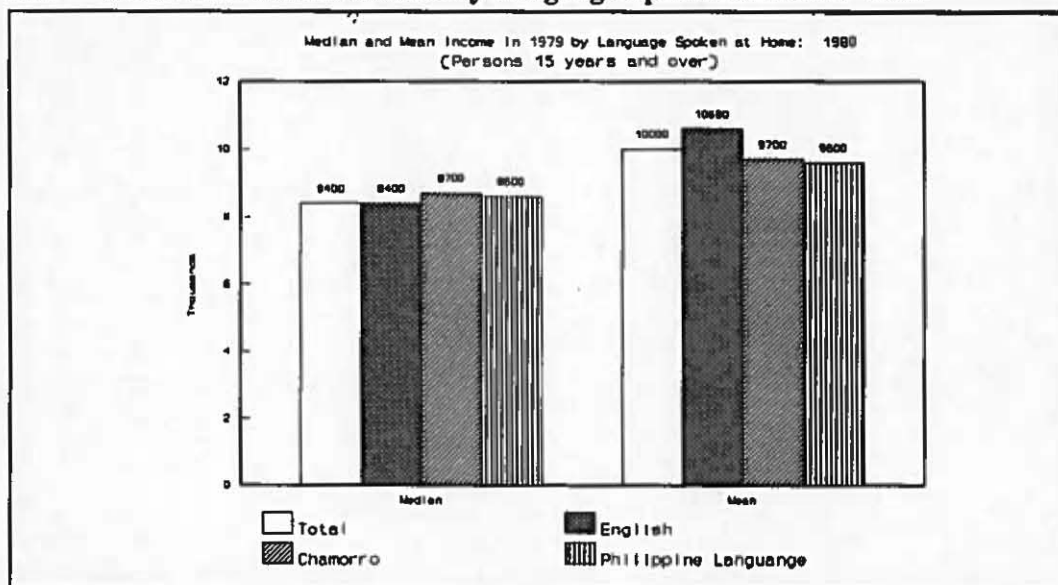
In 1979, Chamorro speakers had the highest median income, followed by those who spoke a Philippine language (Table 12.11 and Figure 12.3). English speakers had lowest median income, but the highest mean income. This was more than likely caused by over 7 percent of those who spoke English being in the income category of \$25,000 or more, compared to only 4 percent of Chamorro speakers and 2 percent of Philippine language speakers.

Table 12.11 Income of Persons in 1979 by Language Spoken at Home: 1980

Income	Language				Percent			
	Total	Eng-lish	Cham-orro	Phil. lang.	Total	Eng-lish	Cham-orro	Phil. lang.
Total	69,007	20,222	24,610	13,804	...	...	...	...
With income	50,967	15,866	17,001	10,202	100.0	100.0	100.0	100.0
\$1 to \$499/loss	1,961	567	673	227	3.3	3.6	4.0	2.2
\$500 to \$999	2,162	594	997	323	4.2	3.7	5.9	3.2
\$1000 to \$1999	2,842	761	1,173	477	5.6	4.8	6.9	4.7
\$2000 to \$2999	2,320	634	852	465	4.6	4.0	5.0	4.6
\$3000 to \$4999	4,460	1,202	1,563	958	8.8	7.6	9.2	9.4
\$5000 to 46999	7,453	2,692	1,615	1,432	14.6	17.0	9.5	14.0
\$7000 to \$999	9,690	3,025	3,016	2,182	19.0	19.1	17.7	21.4
\$10000 to \$14999	10,188	2,937	3,690	2,227	20.0	18.5	21.7	21.8
\$15000 to \$24999	7,680	2,292	2,819	1,652	15.1	14.4	16.6	16.2
\$25,000 or more	2,481	1,162	603	259	4.9	7.3	3.5	2.5
Median	\$8,392	\$8,369	\$8,703	\$8,560	...	...	...	...
Mean	\$9,965	\$10,579	\$9,676	\$9,575	...	...	...	...

SOURCE: U.S. Bureau of the Census PC80-1-C/D54, Table 48

Figure 12.3 Mean and Median Income by Language Spoken at Home: 1980



(4) POVERTY INCOME

Families and individuals are classified as being above or below the poverty level using the poverty definition developed at the Social Security Administration in 1964 and revised in 1969 and 1980. The poverty index was based solely on money income and did not reflect the fact that many low-income persons received non-cash benefits such as food stamps, medicaid and public housing. The weighted average poverty level based on money income used for 1980 is shown in Table 12.12.

Table 12.12 **Weighted Average Poverty Levels based on Money Income for Families and Individuals: 1980**

	Size of Unit										
	1			2			3	4	5	6	7+
	Total	<65	65+	Total	<65	65+					
Income	4190	4290	3949	5363	5537	4983	6565	8414	9966	11269	13995

SOURCE: U.S. Bureau of the Census, Statistical Abstract of the United States: 1984 (104th edition).

In 1979, there were 101,539 persons on Guam for whom poverty status was determined (all persons who were not in group quarters) (Table 12.13). Of this number, 16 percent were below poverty level; 11 percent of whom were in "extreme poverty", below 75 percent of poverty level. Nearly 50 percent of those in the poverty universe were below 200 percent of poverty level.

Table 12.13 **Poverty Status in 1979: 1980**

Poverty Status	Number	Percent
Total in Poverty Universe	101,539	100.0
Below 75 Percent of Poverty Level	10,667	10.5
Below Poverty Level	16,571	16.3
Below 125 Percent of Poverty Level	25,338	25.0
Below 150 Percent of Poverty Level	34,313	33.8
Below 200 Percent of Poverty level	50,698	49.9

SOURCE: U.S. Bureau of Census Summary Tape File 3A, Table 95.

There were 21,780 families for whom poverty status was determined in 1979; 86 percent were above poverty level, the remainder below (Table 12.14). Of those above poverty level, 76 percent had related children in the family; for those below poverty level, 88 percent of families had related children. Fully 7 percent of families above poverty level were headed by a female householder with no husband present; this figure was over 35 percent for those families below poverty level. Female householders below poverty level had related children in the family in 92 out of 100 homes.

Table 12.14 Percent Families by Type by Poverty Status in 1979 by Children: 1980

Families	Total		Female Householder, No Husband Present	
	Income Above Poverty	Income Below Poverty	Income Above Poverty	Income Below Poverty
Total	18770	3010	1352	1063
Percent	100.0	100.0	100.0	100.0
With related children	75.8	87.8	77.0	91.1
Under 6 years and 6-17 years	23.7	35.4	19.9	33.6
Under 6 years	21.1	24.2	15.2	22.9
6 to 17 years only	31.0	28.2	41.9	34.6
Without related children	24.2	12.2	23.0	8.9

SOURCE: U.S. Bureau of the Census Summary Tape File 3A, Table 86.

For families with related children (Table 12.15), and above poverty level, regardless of whether the householder was male or female with no husband present, the majority (41 and 54 percent, respectively), had children who were between 6 to 17 years old. Of all families with income below poverty, the majority (40 percent) had children who were either under 6 years, or 6 to 17 years old; female householders below poverty were nearly equally split between having children under 6 years old or 6 to 17 years (37 percent), or only between 6 to 17 years old (38 percent).

Table 12.15 Families by Type by Poverty Status in 1979 by Children: 1980

Families	Total		Female Householder, No Husband Present	
	Income Above Poverty	Income Below Poverty	Income Above Poverty	Income Below Poverty
Total	...	...	...	...
With related children	100.0	100.0	100.0	100.0
Under 6 years and 6-17 years	31.2	40.4	25.8	36.9
Under 6 years	27.9	27.5	19.8	25.1
6 to 17 years only	40.9	32.1	54.4	38.0
Without related children	...	...	...	...

SOURCE: U.S. Bureau of the Census Summary Tape File 3A, Table 86.

(5) SUMMARY

Median Income of unrelated individuals in 1979 was shown to be lower than median income of both households and families; mean income of households was higher than either family or individuals. Wage and salary income was the highest mean income type; farm income was the lowest. The Central region had the highest mean income for all types except for Public Assistance (Southern region was highest) and all other income (Northern region ranked first). Each increase in the number of workers in families by 1 increased the income by between 6 to 8 thousand dollars.

Per capita income for the island was \$4,793 in 1979, compared to \$7,298 for the U.S. Per capita income on Guam increased by 22 percent between 1969 and 1979 when adjusted for inflation. While 20 percent of all persons with income and 23 percent of males with income earned between \$10,000 and \$14,999 in 1979, only 15 percent of females with income did so; their most frequently earned income was between \$7,000 and \$9,999. Over 7 percent of males and 5 percent of all persons earned \$25,000 or more in 1979; only 1 percent of females did so. Guam born persons had a mean income of \$9,504, lower than either all persons (\$9,965) or the non-Guam born (\$10,219). High school graduates and English speakers were more frequently represented in the higher income brackets than non-graduates and speakers of other languages.

Fully 16 percent of Guam's population were considered as being below poverty level in 1979, while nearly 50 percent were below 200 percent of poverty status. The majority of these families had children, most of whom were under 6 to 17 years of age. In the 1990 census, 9.0% with income in 1989 were shown as being below poverty level.

h) PROFILE OF THE ELDERLY AND MILITARY POPULATION

While the data incorporated into the CHAS plan, encompasses a large body of material, there are two populations on Guam whose characteristics are not explored in detail, the elderly and the military. The following sections present profiles of these two important subgroups.

PROFILE OF THE ELDERLY

The elderly are of special concern to demographers these days because of an anticipated large increase in their numbers and proportion of the population. Those who were elderly (65 years and over) in 1980 were born in 1915 or earlier, a time when sanitation and other public health measures had not yet taken a strong grip on Guam. They made up only 2.8 percent of Guam's total population in the 1980 census. By 1990, when the ranks of the elderly will include all those born in 1925 or earlier, their proportion of the population should not rise any higher than 3.3 percent, a very small gain. It will not be until the year 2010 that the impact of the post-World War II 'baby boom' and the changes in nutrition and sanitation promoted by the Naval (and later, civilian) government will be felt. It is important, however, that baseline data on the elderly be collected and analyzed so that any changes in their characteristics can be documented.

Because the elderly on Guam are primarily civilian (96 percent), this analysis will be restricted to civilians. The civilian population in our retabulations of the 1980 census data is that population which was left after active-duty military and their dependents were subtracted from the total population. If an active-duty military person was resident in a household, that household was deemed 'military' and subtracted. If an elderly person was a dependent of an active-duty person, he or she was considered military and removed. The data presented here were derived from Tables 19-22, 24, 29, 35, 36 and 47 of the U.S. Bureau of the Census PC80-1-C/D54, Detailed Social and Economic Characteristics, Special Retabulations.

There were 2870 civilian elderly in 1980, 3.4 percent of the civilian populations of 83,226. Slightly over 47 percent were males; the 53 percent if females in the elderly population supports the fact that women generally outlive men. Nearly all (99.5 percent) were in households rather than any form of group quarters. Those that were in some form of group quarters were more than likely confined in the Intermediate Care Facility of the Guam Memorial Hospital. Over half (53 percent) were either the head or spouse of the head of a family household, 36 percent were in a family household with relatives, and only 11 percent were with non-relatives or in non-family households.

Nearly 56 percent were married, 35 percent were widowed, and 6 percent had never married. Most (66 percent) of the never married were females. Nearly 55 percent of those divorced or separated were males while 77 percent of those widowed were females.

There were 8795 children ever born during the reproductive lifetime of civilian elderly women, and 7325 children still alive in 1980. Some of these children would have died young, causing replacement childbearing to take place; this may be why elder women reported higher numbers of children ever born and still alive than younger women did.

Just over 57 percent of elderly were born on Guam, 29 percent in the Philippines, 5 percent in the United States, 2 percent in the Northern Marianas, and the remainder elsewhere. Fully 58 percent were Chamorro, 28 percent Filipino, 5 percent White, the remaining 8 percent were of other races. Barely

8 percent spoke English at home; the majority spoke Chamorro (58 percent), with another 30 percent speaking a Philippine language at home.

The elderly were not very mobile; 63 percent lived in the same house as they had in 1975. an additional 13 percent lived in the same district, and 9 percent in another district on Guam. Of those who had not lived on Guam in 1975, 65 percent had lived in the philippines and 21 percent in the United States. Of the 42 percent of civilians who were not born on guam, 17 percent migrated before 1950, the period with the highest proportion of migrants. The second most popular period was from 1975 to 1978, when 16 percent of migrants came to Guam, then 1971 to 1974, with 14 percent. Fully 58 percent of these migrants were permanent residency aliens in 1980, and 38 were naturalized citizens, with the remainder having some other form of citizenship status.

More due to cultural demands than for any other reason, the elderly were not as formally educated as younger age groups. Most (64 percent) had some elementary school (up to 8th grade), and some (14 percent) had some high school, but only 18 percent were high school graduates, and only 6 percent had a 4 year college degree or more.

By age 65, most persons had retired, leaving only 491 persons (17 percent) in the labor force, over 98 percent of whom were employed in 1980. Of those employed, 43 percent were private wage and salary workers, 29 percent worked for the local government, and 19 percent for the federal government. Only 8 percent were self-employed, and just over 1 percent were either unpaid family workers or subsistence workers. Fully 30 percent of employed persons were in service occupations, 23 percent in managerial and professional specialties, 15 percent in precision production, craft and repair, and 13 percent were operators, fabricators, and laborers (mostly in transportation and material moving occupations). The industry with the highest representation among the elderly was that of public administration (21 percent), followed by retail trade (17 percent) and professional and related services (also 17 percent). Over 97 percent of those in the labor force in 1979 worked in 1979; 73 percent worked for 50 to 52 weeks; 76 percent worked 35 or more hours per week.

Nearly 75 percent of the elderly had an income in 1980 were most likely to be civilian, female, living in a household as a head of household or spouse of head, married, born on Guam, and Chamorro. If female, she would have had 5.8 children, with 4.8 of them still alive. They would be most likely to speak Chamorro at home, not have much formal education, and be living in the same house as they had in 1975. Most would not be in the labor force, but they would have an income; for most, however, that income would at about poverty level.

With this baseline data from 1980, comparisons can be made with data from the 1990 census to document changes in the characteristics of the elderly on Guam.

PROFILE OF THE MILITARY

The special tabulations developed to desegregate military households from civilian households provide data on age and sex of the military population. The data used in this section are from PC80-1-C/D54 and PC80-1-C/D54 Civilians, Tables 19, 21, 22, 23, and 46.

Although, there were 22,753 persons (21 percent) living in households or group quarters which contained only military. Of these, 13,265 (58 percent) were males, compared to 51 percent of males in civilian households or in group quarters.

The median ages for the two populations did not differ significantly, but the distributions were significantly different. Although the median for the whole population was 22.3 years, the median for civilians was slightly less (21.8 years) and the median for the military was slightly more (22.9 years). The median for males in the military was about a year older than for females, while the median for female civilians was about a half year older than for males.

Military personnel seem to have higher fertility than civilians, since 14 percent were children less than 5 years old in military households, compared to 12 percent in civilian households. However, examining fertility data gathered in the census shows that civilian females had 2,738 children ever born per 1,000 women, while military females had only 1,541 children even born per 1,000 women.

Because they are in the military, more than 1 in 5 of all military persons were 20 to 24 compared to only 8 percent of the civilians. The percentage of military in the 25 to 29 year age group was double that of the civilians. More than 12 percent of the military population was 30 to 34 years old compared to only 8 percent of the civilian population.

On the other hand, slightly larger proportions of persons in the 35 to 44 year old age group were civilian than were military, partially because of large numbers of immigrants in this age group. And, larger proportions of persons older than 44 were civilian than were military. More than 9 percent of the civilian population was 45 to 54 years old, compared to less than 2 percent of the military population. Only about 1 percent of the military population was 55 years old and over, compared to more than 9 percent of the civilian population.

The percentage distribution by age group also shows differences. Altogether females were 48 percent of the population on Guam in 1980; while females constituted almost half of the civilian population (and, of course, many of these were dependents). Among the civilians, in the young ages females were just slightly less than half of all persons and were more than half of those 20 to 35 years old. For ages 35 to 64, however, there were more males than females in the civilian population, probably because of the selective nature of international migration, with larger numbers of male immigrants than females. For the elderly, females were a larger percentage of the civilian population than were males.

The military population showed a very different pattern. More than 2 of every 3 military persons between 15 and 24 were male, and while the proportions decreased to below 6 in 10 for persons 25 to 34, more than 6 in 10 of those 35 to 44 were males. More than half of the persons 55 years and over in military households, however, were female.

There is some evidence from these data that there is a discrepancy between the military and civilian data for persons 20 to 29 which show surpluses of civilian females. Military males who were on ships and left their families behind would have been recorded as civilian since no one in the household would have been identified as military; hence, this surplus of civilian females in the age group was probably at least partially explained by the fact that many of these women were married to military personnel who were on ships and left their families behind. (Their children are less easily disaggregated from all children).

There were 10,125 persons (10 percent of Guam's total population) in the military in 1980, including 9,224 males and 901 females. The median age of these persons was 26.5 years, more than 4 years more than for the rest of the military households (because so many of the other people in military households were children), and about 4 years more than for the general population of Guam. Military persons constituted more than half of all persons 20 to 24 years old (67 percent of the males and 33 percent of the females in that age group), and were 49 percent of the persons 25 to 29 years old.

There were more than 10 military males for every military female in 1980. None of the age groups showed anything like equal proportions. Although there were fewer than 10 males per female for persons less than 29 and more than 55, there were 25 males for every female 30 to 34, and 51 for those 35 to 44 years old.

The civilian community of Guam in 1980 had a larger average household size than did the military, 4.25 persons and 3.41 persons, respectively. For all military households, there were more females than males under 15 and over 55, but males predominated in the middle years, with more than 2 males per female 15 to 24 years old. The problem with the ratio of males to females 20 to 29 in the civilian population is also seen here, since there is a great surplus of females here, once again indicating that some of these females should more properly have been placed in the military category.

The military had greater proportions of its population married (71 percent) than did the civilian population (62 percent), but had fewer that were single (26 percent of military to 31 percent of civilians), widowed (1 percent of military to 4 percent of civilians) or divorced (2 percent of military to 3 percent of civilians). Military males had slightly higher proportions single (34 percent) than did civilian males (33 percent), but the percentages married and divorced were about the same. There were more civilian males who were widowed (2 percent) than there were military widowers (less than 1 percent). Military females were more married (85 percent) than were civilian females (60 percent), but had lesser proportions single, widowed, or divorced.

The military population spoke only English in the majority of homes (68 percent), followed by other, unspecified languages (18 percent), Philippine languages (9 percent), and Chamorro (5 percent). They were mobile: 67 percent had lived in the U.S. In 1975, and 11 percent in Asia or elsewhere; only 10 percent had lived on Guam.

Over 16 percent of the military population had been born outside Guam or the U.S.; 54 percent of these persons were permanent resident aliens, 33 percent were naturalized citizens, 4 percent were temporary aliens, and 9 percent had some other U.S. citizenship status. Nearly 29 percent of the civilian population had been borne outside Guam or the U.S.; 51 percent were permanent resident aliens, 38 percent naturalized citizens, 10 percent were temporary aliens, and 2 percent had some other status.

Of the 22,753 military persons on Guam in 1980, nearly 23 percent were 3 years old and older and enrolled in school, compared to 37 percent of the civilian population. Of the military population enrolled, 6 percent were in pre-kindergarten, 65 percent in elementary (K-8), 12 percent in secondary, and 17 percent in post-secondary schools. In the civilian population, the proportions enrolled were 2 percent in pre-kindergarten, 61 percent in elementary, 26 percent in secondary, and 10 percent in post-secondary.

The military had higher levels of attainment than did the civilian population: while 2 percent of civilians had no schooling, far less than 1 percent of the military had not gone to school. Over 88 percent of the military population had graduated from high school, compared to 60 percent of the civilian population, and 45 percent of the military had compared to 60 percent of the civilian population, and 45 percent of the military had completed some college, while only 32 percent of civilians had done so.

The 69 percent of the military were 16 years old and older in 1980; the civilian proportion was just over 61 percent. Over 80 percent of the military population was in the labor force, and 98 percent were employed in 1980. The figures from the civilian population are similar: just over 62 percent of the civilian population 16 years old and older were in the labor force, with over 96 percent employed.

The military person on Guam in 1980 was, in summary, more likely to be male, married, between 20

and 34 years old, English-speaking, a high school graduate, employed, a U.S. citizen, and had lived in the U.S in 1975.

i) ESTIMATES AND PROJECTIONS OF FUTURE POPULATION

Population and housing censuses, the crucial source of data on the size, structure and distribution of population and housing, are taken at regular intervals. They involve a great deal of planning, enumeration, compilation, analysis, publication, and require tremendous expenditures of money and human energy. They also require considerable time to make available the details of information collected at a certain point in time. Since the Government of Guam needs the most up-to-date information about the size and structure of the population in order to make reasonable plans for development, estimates of the population between censuses are needed. Data from Censuses, surveys, and other statistical data can be used to make estimates in between complete population counts. projections are also made based on these data to help understand future needs. The government uses estimates and projections for its planning, but is not the only user of population estimates and projections, since social service organizations, university and social research centers, market research centers, and business organizations often also need estimates and projections for their own purposes.

Estimates for current populations and projections for the future help planners by providing them with likely consequences of current trends.

Estimates and projections are based on factual information as well as assumptions. The accuracy of the estimates, therefore, depends on the accuracy of the available data and assumptions. Furthermore, when projection of a population are made for some future date, they are based on certain assumptions as to the likely course of vital events. The components of population - fertility, mortality, and migration - are likely to follow certain courses. The initial data used as the base to make the projections must be error-free. Also, we know that if the period of population projection is long, there is a greater likelihood of error in the projections because the assumptions may not hold for long periods.

The accuracy of the population estimates or projections depends on the extent to which the assumptions prove correct and not on the level of sophistication of the method of calculating the projections. Better techniques are being developed as time goes by. (Before undertaking population estimates or projections, it is important that the data be evaluated and adjusted for errors, incompleteness, and other inconsistencies).

ESTIMATES

The Population Estimates Branch staff, Population Division, Bureau of the Census used the 1980 census as base year to make annual estimates after 1980. The balancing equation, with births, deaths and net migration was used to estimate the population.

The estimates of the population of Guam were developed by adding the components of change to the relevant population base. The July 1, 1980, through 1986 estimates were derived using a base composed of the 1980 census count less the estimated population on April 1, 1980, who were born in the United States, with the April 1, 1980 American population on Guam being estimated based on data furnished by the Guam Department of Commerce and the U.S. Department of Defense. The population base is restricted because of the large and relatively transient Federally affiliate population for which migration is substantial and difficult to estimate. Rather than estimate migration for this population group, administrative records were used to determine the number of Federally affiliated persons on each estimate date. The following were added to the relevant population base:

1. Natural increase. The excess of births over deaths to the population is based on reported birth and death statistics. Birth and deaths occurring in the U.S. Naval Hospital are excluded.
2. Change in alien contract workers. This category is primarily composed of contract workers brought in from the Philippines by the Department of Defense. The estimates are based on information provided by the Guam Department of Commerce.
3. Net alien immigration. These are persons accepted for permanent residence in the United States. The estimate is based on Immigration and Naturalization Service (INS) figures on immigrants who reported on their visa applications that they intended to live on Guam. It is assumed that 40 percent of the immigrants each year either leave Guam or inaccurately reported their intention of living on Guam. This assumption is based on an analysis of expected versus actual change in the alien population between 1970 and 1980. Expected change was derived from INS records on immigrants and naturalization plus the change in alien contract workers (recorded in item 2 above). Actual change was based on the net change in the annual alien registration data collected by INS until 1982.
4. Federally affiliated population. The number of Armed Forces stationed on Guam was obtained from the U.S. Department of Defense. The Guam Department of Commerce provided data on the numbers of Federal civilian employees and dependents of both Federal civilian employees and the military.
5. Guamanian inductions less discharges. The number of persons in the Armed Forces in the United States who lived on Guam before joining the military is available from the Department of Defense. One half the change in pre-service residence on Guam was used to approximate inductions less discharges on Guam.

No data are available on the movement of the nonfederally affiliated population who are not covered above, but this component of net migration is assumed not to be large.

Limitations of the Estimates. The estimates are based on the special estimating method described above which yields point estimates of the various subcategories of the population. The test of this method for the 1960-1970 period showed an overestimate of about 10 percent. This level and direction of error still existed in the estimates in 1980, when the actual 1980 census count of 105,979, was 10,272 (9.7 percent)

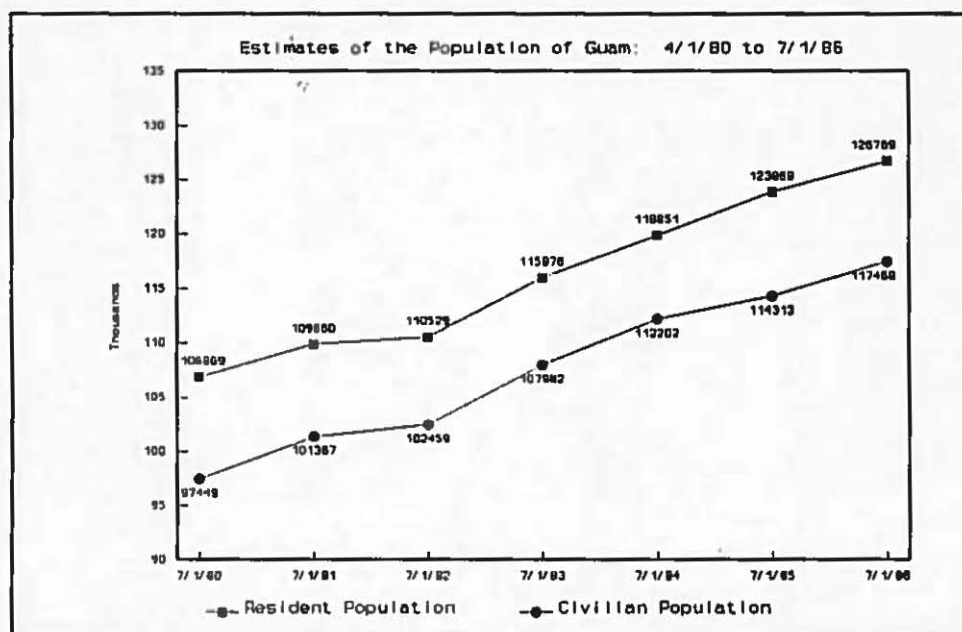
less than the estimate. Likely explanations for this difference include the lack of accurate migration data as well as conflicting information on persons who were born in the 50 States and on the special populations employed in the current methodology.

Table 13.1 Estimates of the Population of Guam: 4/1/80 to 7/1/86

Population Group	From: To:	4/1/80 7/1/80	7/1/80 7/1/81	7/1/81 7/1/82	7/1/82 7/1/83	7/1/83 7/1/84	7/1/84 7/1/85	7/1/85 7/1/86
Base population		85,603	86,323	89,682	92,946	95,886	98,928	102,063
Births		458	2,137	2,136	2,100	2,205	2,303	2,300
Deaths		97	369	360	390	405	375	400
Change alien works		0	1	114	0	0	0	0
Inductions less								
discharges Guam . . .		29	270	54	-30	-46	96	-38
Alien immigrants		550	2,200	2,200	2,100	2,147	1,851	2,065
Alien emigrants		220	880	880	840	859	740	826
Federal population:								
Cvln emply dpnts . . .		1,327	1,213	860	785	811	700	603
Armed Forces		9,420	8,493	8,070	7,994	7,649	9,556	9,301
AF dependents		9,799	10,472	8,653	11,311	12,463	11,550	11,701
End: Resident pop . .		106,869	109,860	110,529	115,976	119,851	123,869	126,769
Civilian pop		97,449	101,367	102,459	107,982	112,202	114,313	117,468

SOURCE: U.S. Bureau of the Census Unpublished Worksheets.

Figure 13.1 Estimates of the Civilian and Resident Populations: Guam, 1980 to 1986



PROJECTIONS

The U.S. Bureau of the Census's Center for International Research has developed a program called RUP (Rural-Urban Projection) to do component projections for various country and sub-country populations. The projections are done by single years of age and for single years of time. The program is calendar-year oriented, meaning that vital rates and events are those occurring during the calendar year (January 1 to December 31) while the populations always refer to midyear (approximately July 1).

The series of projections presented here run from 1980 through 2030. Age specific fertility information was obtained from the 1980 census. The 1980 own children information discussed in Chapter 5 was used for the entire period, the assumption being that since fertility is already very low for Guam, it is unlikely to go much lower. Although it is likely that continued immigration will bring females with higher-than-average fertility, this is offset by the fertility of Chamorro and Filipino women born on Guam decreasing to become more like that of all women on Guam.

The Coale-Demeny Model Life Table obtained from the children ever born and children surviving in the 1980 census using the Brass procedure provided life expectancies and mortality schedules used for these runs. Since mortality was already very low in 1980 (and life expectancy high), changing mortality was not incorporated into the model.

Table 13.2 shows the age specific projections for females when migration is ignored. The number of females on Guam will approximately double to about 100,000 about 2015.

Table 13.2 Projections Without Migration for Females: 1980 to 2030

Age	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
Total	50658	56849	63343	70065	77000	84187	91623	99302	107189	115238	123451
0-4	6382	6946	7432	7902	8408	9000	9648	40319	11017	11757	12560
5-9	6174	6370	6931	7417	7887	8392	8782	9629	10299	10993	11734
10-14	5503	6167	6364	6922	7408	7879	8383	8973	9618	10289	10981
15-19	5144	5496	6159	6357	6913	7398	7870	8370	8961	9606	10275
20-24	5089	5133	5486	6148	6346	6899	7383	7854	8354	8944	9588
25-29	5130	5075	5118	5470	6131	6328	6880	7364	7833	8331	8919
30-34	4435	5113	5058	5101	5451	6110	6306	6857	7339	7805	8302
35-39	2860	4414	5088	5032	5077	5426	6080	6277	6823	7304	7769
40-44	2399	2841	4385	5053	4996	5042	5389	6037	6236	6777	7253
45-49	2018	2372	2808	4337	4996	4939	4986	5328	5967	6165	6701
50-54	1745	1981	2330	2757	4259	4906	4849	4896	5231	5859	6054
55-59	1280	1695	1924	2265	2680	4139	4765	4709	4758	5081	5691
60-64	919	1223	1619	1835	2162	2557	3953	4546	4491	4542	4849
65-69	689	848	1129	1493	1693	1996	2359	3651	4192	4141	4190
70-74	417	598	736	980	1293	1467	1730	2044	3167	3628	3586
75-79	271	324	465	573	763	1002	1139	1345	1588	2463	2807
80 +	203	253	311	423	537	707	921	1103	1315	1553	2192

SOURCE: U.S. Bureau of the Census Unpublished Tabulations.

Figure 13.2 Projections Without Migration by Sex: 1980 to 2030

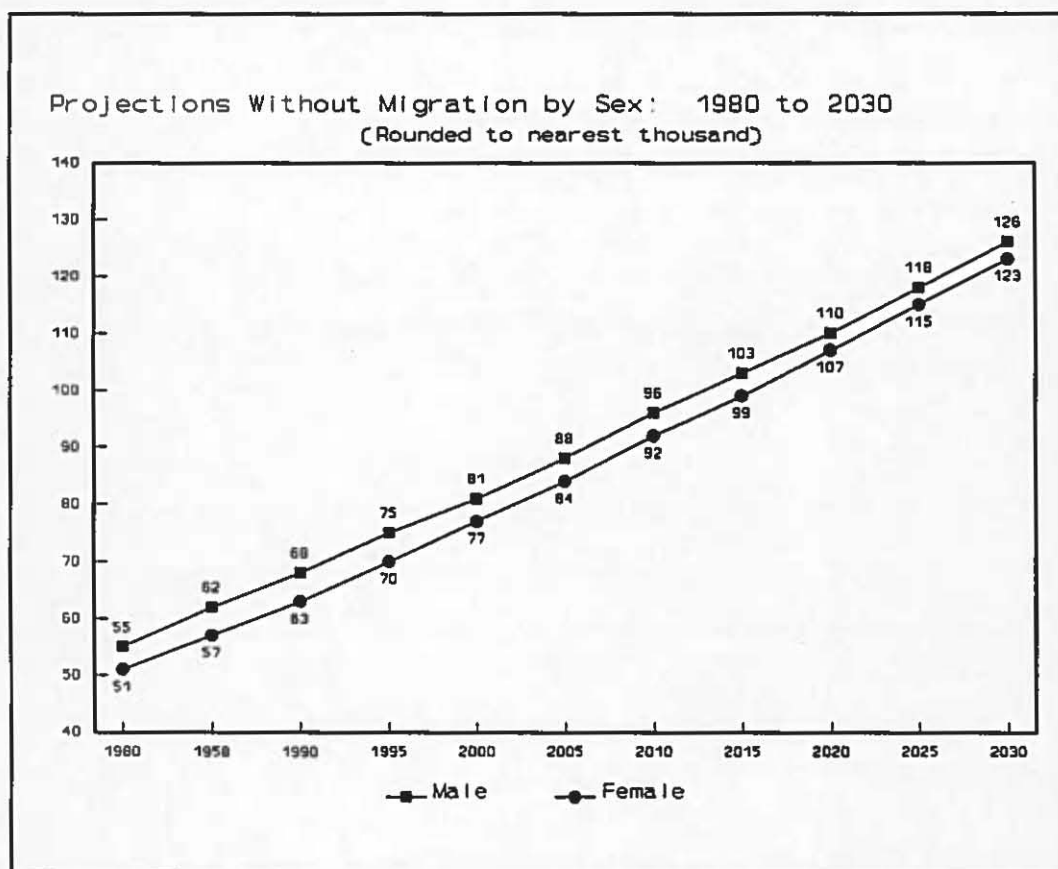


Table 13.4 Average Annual Net Migration and Rate by Age: 1970 to 1980

Age Group	Average Annual Net Migration			Annual Migration Rate		
	Total	Males	Females	Total	Males	Females
Total	-397	-412	15	-7.68	-8.05	.37
0- 4	-104	-56	-48	-16.71	-8.82	-7.89
5- 9	-172	-83	-89	-28.16	-13.19	-14.97
10-14	38	36	2	6.67	6.38	.29
15-19	87	51	36	18.28	10.29	7.99
20-24	-7	-43	36	1.56	-6.87	8.43
25-29	130	54	76	32.35	12.51	19.84
30-34	-77	-122	45	-16.34	-29.30	12.96
35-39	-48	-52	4	-14.00	-15.59	1.59
40-44	-79	-69	-10	-28.86	-24.18	-4.68
45-49	-73	-65	-8	-34.24	-29.71	-4.53
50-54	-36	-36	0	-20.47	-20.47	0.00
55-59	-24	-21	-3	-18.82	-15.85	-2.97
60-64	-9	-6	-3	-12.01	-8.19	-3.82
65-69	-3	-1	-2	-6.96	-2.61	-4.35
70-74	-4	0	-4	-14.26	-.97	-13.29
75 +	-16	1	-17	-44.38	3.93	-48.31

SOURCE: Office of Vital Statistics, Department of Public Health and Social Services, Guam.

Since females experience net in-migration their projected totals are greater than without migration (Table 13.5). By 2015, there would be about 5,000 more females when migration is included in the package than when it is excluded.

Table 13.5 Projections With Migration for Females: 1980 to 2030

Age	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
Total	50658	57413	64850	72670	80661	88791	97177	105954	115104	124435	133837
0- 4	6382	7007	7834	8493	8981	9474	10120	10918	11782	12636	13494
5- 9	6174	6020	6610	7388	8007	8469	8933	9543	10296	11112	11914
10-14	5503	5945	5789	6358	7109	7704	8151	8596	9182	9906	10691
15-19	5144	5611	6062	5900	6479	7247	7855	8311	8762	9360	10100
20-24	5089	5390	5834	6303	6137	6736	7534	8166	8642	9111	9732
25-29	5130	5450	5722	6245	6749	6568	7207	8063	8740	9250	9752
30-34	4435	5547	5892	6193	6755	7297	7107	7799	8724	9453	10007
35-39	2860	4584	5727	6078	6399	6972	7528	6340	8053	9008	9756
40-44	2399	2821	4522	5644	5987	6311	6872	7416	7235	7938	8881
45-49	2018	2318	2725	4371	5454	5785	6100	6639	7166	6990	7670
50-54	1745	1958	2247	2642	4237	5291	5611	5916	6441	6951	6778
55-59	1280	1681	1887	2166	2546	4084	5099	5405	5700	6208	6699
60-64	919	1203	1577	1769	2034	2389	3835	4784	5070	5350	5821
65-69	689	829	1089	1427	1599	1842	2159	3471	4324	4580	4841
70-74	417	574	690	906	1186	1326	1532	1792	2890	3587	3796
75-79	271	281	389	466	611	796	889	1034	1204	1956	2405
80 +	203	234	254	321	391	500	645	761	893	1039	1500

SOURCE: U.S. Bureau of the Census Unpublished Tabulations.

Since males experience net out-migration during the projection period, their projected populations are lower than when migration is excluded (Table 13.6). The 1970 to 1980 period may turn out to be unusual, particularly if military are moved from the Philippines to Guam at some point in the future.

Table 13.6 Projections With Migration for Males by Age: 1980 to 2030

Age	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
Total	55321	59622	64389	69232	74186	79191	84534	90433	96863	103730	110985
0- 4	6620	7297	8156	8841	9348	9863	10535	11364	12264	13155	14045
5- 9	6458	6246	6886	7698	8342	8822	9308	9943	10723	11573	12415
10-14	5835	6341	6121	6748	7548	8179	8650	9127	9749	10512	11346
15-19	5849	6066	6596	6363	7016	7848	8504	8994	9492	10139	10929
20-24	6019	5870	6094	6622	6395	7052	7888	8545	9034	9535	10190
25-29	5194	6061	5932	6146	6688	6448	7111	7956	8621	9114	9620
30-34	4854	4970	5815	5655	5877	6378	6171	6804	7608	8243	8709
35-39	3386	4303	4409	5154	5022	5213	5663	5474	6035	6749	7314
40-44	2650	3039	3866	3958	4630	4506	4679	5080	4916	5419	6059
45-49	2171	2284	2615	3331	3411	3991	3880	4031	4374	4235	4669
50-54	2238	1868	1962	2247	2859	2928	3424	3334	3460	3757	3635
55-59	1634	1952	1631	1713	1962	2497	2557	2988	2912	3021	3280
60-64	1008	1427	1705	1426	1496	1714	2181	2236	2611	2544	2640
65-69	729	872	1231	1469	1229	1291	1479	1880	1928	2254	2193
70-74	392	593	712	1002	1192	997	1052	1204	1532	1568	1835
75-79	185	287	133	521	734	868	725	767	877	1119	1146
80 +	99	146	225	338	437	596	727	706	727	793	960

SOURCE: U.S. Bureau of the Census Unpublished Tabulations.

Table 13.7 shows the projected proportion of the population which will be elderly over the next half-century. Although less than 3 percent of Guam's population was 65 years and over in 1980, the proportion will double in 25 years to 6 percent in 2005, and will be as much as 10 percent in 2030. Because fertility is low, and life expectancy is high, the proportion of the population being elderly is certain to increase substantially.

Table 13.7 Projections Without Migration for Persons 65 Years and Over: 1980 to 2030

Age	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
Total	2985	3948	5384	7209	8639	10218	12160	15940	19638	22818	24734
%	2.8	3.3	4.1	5.0	5.5	5.9	6.5	7.9	9.0	9.8	9.9
Males	1405	1925	2743	3740	4353	5046	6011	7797	9376	11033	11959
Fmles	1580	2023	2641	3469	4286	5172	6149	8143	10262	11785	12775

SOURCE: U.S. Bureau of the Census Unpublished Tabulations.

CONCLUSIONS

As was seen in Chapter 1, Guam's population has been extremely volatile both in its count, and in its characteristics. Even populations experiencing massive migration of one sort or another, rarely see the roller coaster type changes in male-female ratios and age patterns. Since Guam has been especially influenced by the fluctuations of the military and great deal of Asian migration in recent years, the projections presented here have to seem as very tentative. It is very likely that the number of military will continue to ebb and flow, that Asian migration will continue, and that new migration will come from the Micronesian areas. Since the amount and characteristics of this migration is not yet known, it is not possible to account for them in the projections.

**Housing Assistance Needs of
Low & Moderate Income Households** Comprehensive Housing Affordability Strategy (CHAS)

Name of Jurisdiction(s) or Consortium: **Guam Housing and Urban Renewal Authority** Five Year Period: FY: 1992 through FY: 1996

Mark one:
☐ Current Estimate as of: (enter date)
☐ Five-Year Projected Estimate as of: (enter date)

Mark one:
☐ All Households
☐ Racial/Ethnic Group Households: (specify)

Household by Type, Income, & Housing Problems	Renters					Owners				
	Elderly Households (A)	Non-elderly Households			Total Renters (E)	Elderly Households (F)	Non-elderly Households			All Owners (J)
		Small Family (2 to 4) (B)	Large Family (5 or more) (C)	All Other Households (D)			Small Family (2 to 4) (G)	Large Family (5 or more) (H)	All Other Households (I)	
1. Very Low Income (0 to 50%)										
2. With Housing Problems										
3. Physical Defects										
4. Overcrowded										
5. Cost Burden > 30%										
6. Cost Burden > 50%										
7. Other Low-Income (51 to 80%)										
8. With Housing Problems										
9. Physical Defects										
10. Overcrowded										
11. Cost Burden > 30%										
12. Cost Burden > 50%										
13. Total Low-Income										
14. Moderate Income (81 to 95%)										
15. With Housing Problems										
16. Physical Defects										
17. Overcrowded										
18. Cost Burden > 30%										
19. Cost Burden > 50%										
20. Middle Income Hshlds. (96 to 120%)										
21. All Households										

*See Table 2A for listing of Racial/Ethnic Groups

c) Table 2A
CHAS Table 2A

U.S. Department of Housing and Urban Development
Office of Community Planning and Development

POPULATION AND MINORITY DATA

Comprehensive Housing Affordability Strategy (CHAS)

Jurisdiction of Consortium:		Five Year Period: (enter fiscal Year FY: through FY:
Category	1980 Census Data (A)	1990 Census Data or Current Estimate (B)
1. Total Population	105,979 (100.0%)	133,152
2. White (Non-Hispanic)	26,901 (25.4%)	19,160 (14.4%)
3. Other (includes Asians)	8,806 (8.3%)	19,792 (14.9%)
4. Filipinos	22,447 (21.2%)	30,043 (22.6%)
5. Chamorros	47,825 (45.1%)	57,648 (43.2%)
6. Micronesian & Pacific Islander	Not Available	6,509 (4.9%)
7. Group Quarters	4,979	Not Available
8. Institutional	144	Not Available
9. Non-Institutional	4,835	Not Available
10. Household Population	101,000	Not Available

1) Other supporting
documentation of need

1(a) TOTAL APPLICATIONS SUBMITTED FOR LAND PURCHASE UNDER THE LANDLESS PROGRAM
During the period of October 1, 1990 thru January 31, 1992

VILLAGE/DISTRICT Applicant is seeking land on:	SINGLE HOUSEHOLDS							MARRIED HOUSEHOLDS						GRAND TOTAL
	1	2	3	4	5 - 6	7 - 8+	Total	2	3	4	5 - 6	7 - 8+	Total	
Agat	113	23	52	8	38	9	243	67	52	45	60	16	240	483
Asan	7	7	8				22						0	22
Barrigada		7	8				15		7				7	22
Chalan Pago	8						8			7			7	15
Dededo	121	31	61	36	21	9	279	201	98	97	44	7	447	726
Mangilao							0	8		7			15	15
Merizo	7						7						0	7
Mongmong							0				7		7	7
Nimitz Hill				7			7						0	7
Ordot		8				7	15						0	15
Piti	7						7						0	7
Santa Rita							0		7				7	7
Talofofo	8	52	22	8	8		98	37	15	15	23	14	104	202
Tamuning							0	15	7				22	22
Umatac				7			7				15		15	22
Yigo	173	220	106	54	33	9	595	238	164	179	134	22	737	1,332
Central		8	7				15						0	15
Northern							0		7				7	7
Total	444	356	264	120	100	34	1,318	566	357	350	283	59	1,615	2,933

SOURCE: Land Administration, Department of Land Management

¹This figure contains data of individuals or families who may have applied for more than one location or village.

During the period of October 1, 1989 thru February 29, 1992

VILLAGE/DISTRICT Applicants are seeking permits on:	SINGLE HOUSEHOLDS							MARRIED HOUSEHOLDS						Grand Total
	1	2	3	4	5 - 6	7 - 8+	Total	2	3	4	5 - 6	7 - 8+	Total	
Agana							0				7		7	7
Agat	79	19		9			107	135		15	43	24	217	324
Barrigada	83	7					90	49	29	23	19	7	127	217
Chalan Pago	9						9	20					20	29
Dededo	889	104	105	37	52	37	1,224	1,380	184	161	332	77	2,134	3,358
Harmon	5						5	8					8	13
Inarajan	7						7						0	7
Makojloj	8						8	9					9	17
Mangilao	195	7	22	15	8		247	255	11	20	54	19	359	606
Merizo	6						6	46		6	9		61	67
Mongmong	4						4		5				5	9
Ordot							0	7		8	3		18	18
Piti	7		8				15						0	15
Santa Rita							0	16					16	16
Talofofo	8			7			15	15	18			8	41	56
Umatac	13	9		15			37	45			6	16	67	104
Yigo	471	14		7			492	628		21	43	37	729	1,221
Yona	9	5					14	22					22	36
Central	22						22	12					12	34
Northern	11						11	62			4		66	77
South	7						7	21					21	28
Open	247		7	7			261	315			3		318	579
Total	2,080	165	142	97	60	37	2,581	3,045	247	254	523	188	4,257	6,838 ¹

SOURCE: Land Management, Department of Land Management

¹ This figure contains data of individuals or families who may have applied for more than one location or village.

l) Other supporting documentation
of need

(2) ASTUMBO PROJECT APPLICANTS

INCOME CATEGORY	HOUSEHOLD SIZE							TOTAL	PERCENTAGE
	1	2	3	4	5 - 6	7 - 8	9+		
\$0 - \$10,000	24	48	74	58	50	11	4	269	34%
\$10,001 - \$20,000	16	41	46	59	89	31	8	290	37%
\$20,001 - \$30,000	7	12	28	48	59	21	7	182	23%
\$30,001 - \$40,000	2	2	4	8	15	3	1	35	4%
\$40,001 & Over	0	0	3	3	8	0	1	15	2%
GRAND TOTAL								791	100%

PART 2

***MARKET AND INVENTORY
CONDITIONS OF HOUSING ON GUAM***

PART 2

1. PRESENT/CURRENT MARKET CONDITIONS OF HOUSING ON GUAM

1. PRESENT/CURRENT MARKET CONDITIONS OF HOUSING ON GUAM TO 1990

The total number of housing units increased from 28,249 to 35,223 in 1990. This is an increase of 6,974 units or 24.6% over the ten year period. See Table 20.1 for the number of housing units built between 1960 to 1990.

Of the housing units built, 17,523 were in the northern area, where there was a 32.3% increase of housing units built from 1980 to 1990. In the central area, there was an increase of 1,647 housing units or an increase of 17.7% between 1980 and 1990. In the south, there was an increase of 1,049 housing units between 1980 and 1990 or 18.3% increase. See table 20.2, 20.3 and 20.4 for a comparison of housing units built by regional area for 1980 and 1990.

The northern area (49.7%) had the largest number of housing units built followed by the central area with 31.1% and the south with 19.2% (see Table 20.6). See tables 20.3, 20.4 and 20.5 for a comparison by area and village of the number of housing units built between 1980 and 1990 and percent increase/decrease between 1980 and 1990.

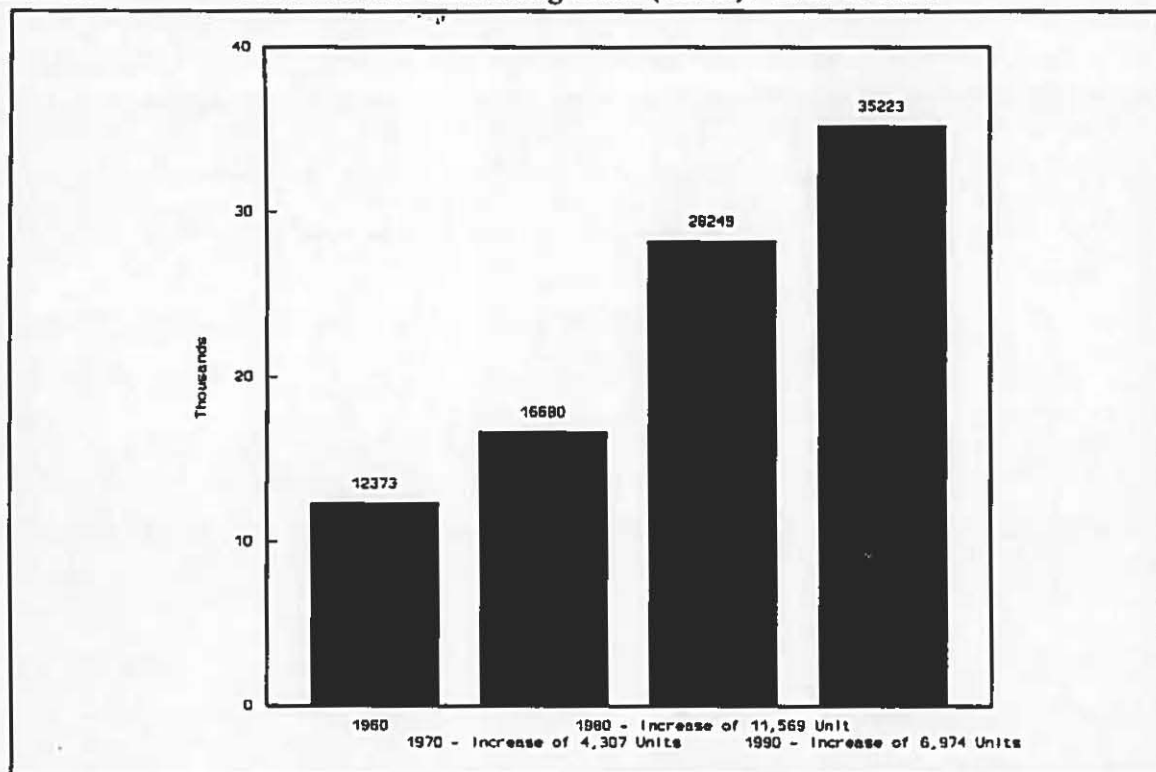
It is our observation that a lot of housing units built between 1980 to 1990 are units which are probably priced beyond \$100,00 per unit or a range of \$150 to \$175,000 for a 3 bedroom unit. Within the last six years, prices for property sky rocketed to an extra ordinary level making the prices of homes beyond the reach of many middle income people and especially low income families including young married couples looking forward to buying their first home. The average price of house lots now of 1,000 to 2,000 sq. meters is probably about \$50,000 or over, located just about anywhere where there is road access and electricity. Some landowners over the past 6 years become overnight millionaires upon selling their properties to off island investors namely Japanese who bought large tracts of land to build golf courses, apartments, condominiums, and hotels.

The median gross rent in 1980 was \$251 and in 1990 increased to \$547 which is a 118% increase. The median contract rent in 1980 was \$193 and in 1990 went to \$483 which is an increase of 150.2%. The median rent of these which were vacant for rent went from \$205 in 1980 to \$542 in 1990 which is an increase of 164.3%.

Most mortgages available from banks and lending institutions on Guam require a down payment of 20%. Thus for a house and lot costing \$150,000 the down payment required would be \$30,000. If you have land and wish to borrow for a \$100,000 home, the down payment required would be \$20,000 in addition to closing charges that the bank may require which is an estimated \$2,000 and over depending on your loan amount. The typical and average family on Guam in our view does not have \$20,000 in the bank to use for a down payment, if he had, he would have already started to build a tin roofing housing on his own part-time or with the assistance of friends.

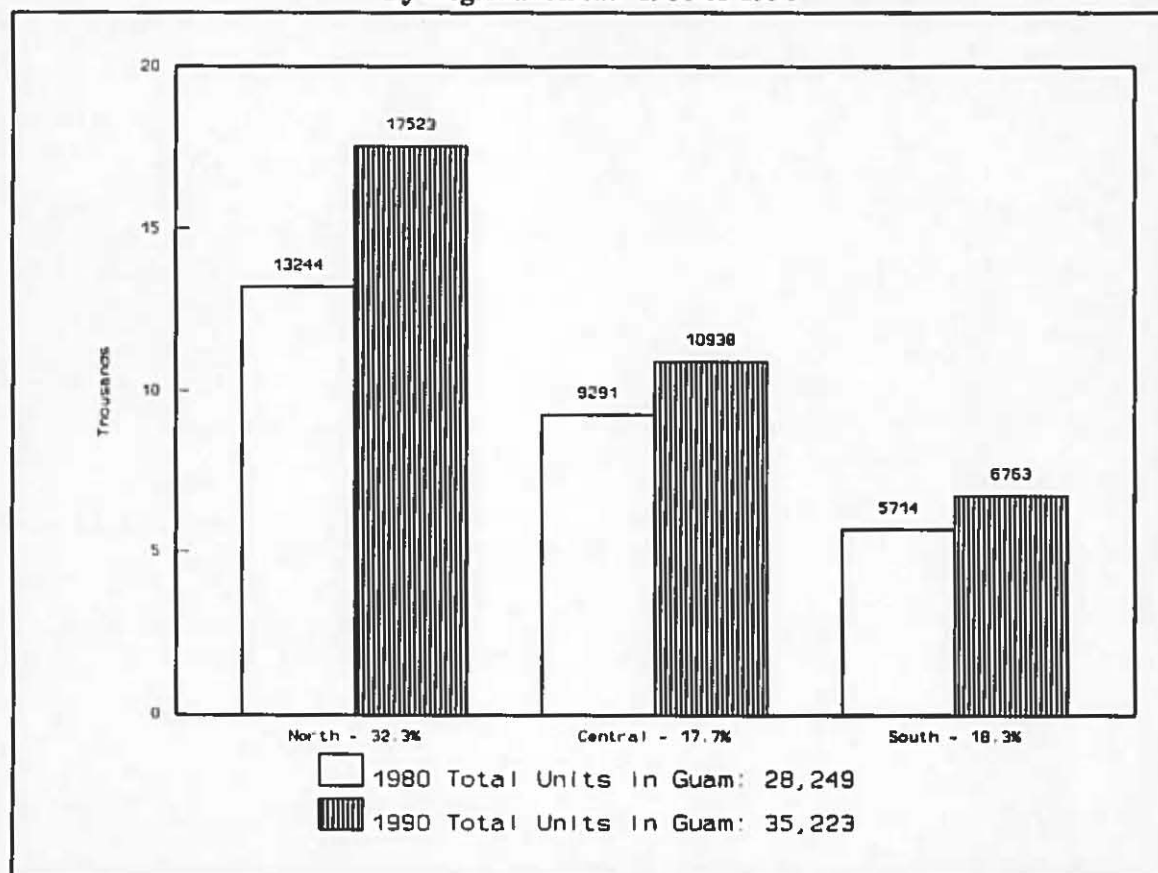
Table 20.1

Total Number of Housing Units (Guam): 1960 to 1990



SOURCE: Census Data, Department of Commerce

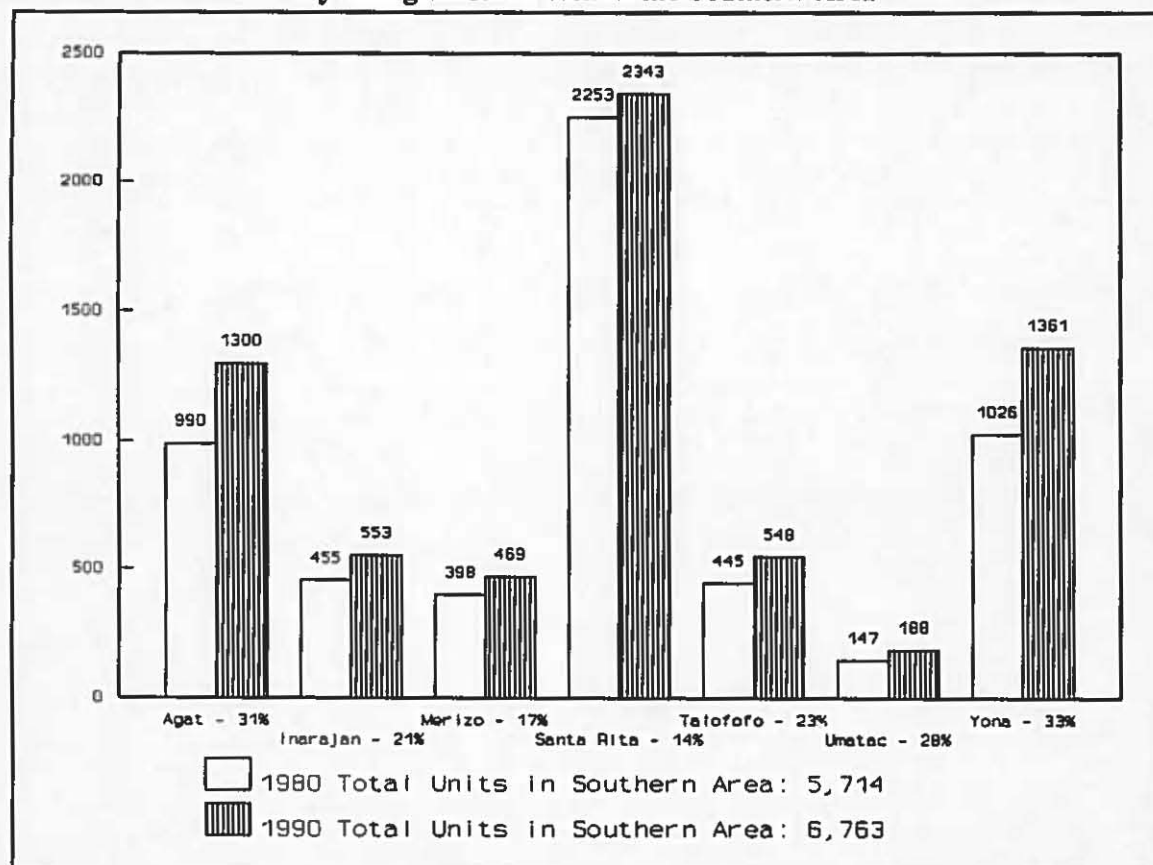
Table 20.2

Total Number of Housing Units and Percent Changes
By Regional Area: 1980 to 1990

SOURCE: Census Data, Department of Commerce

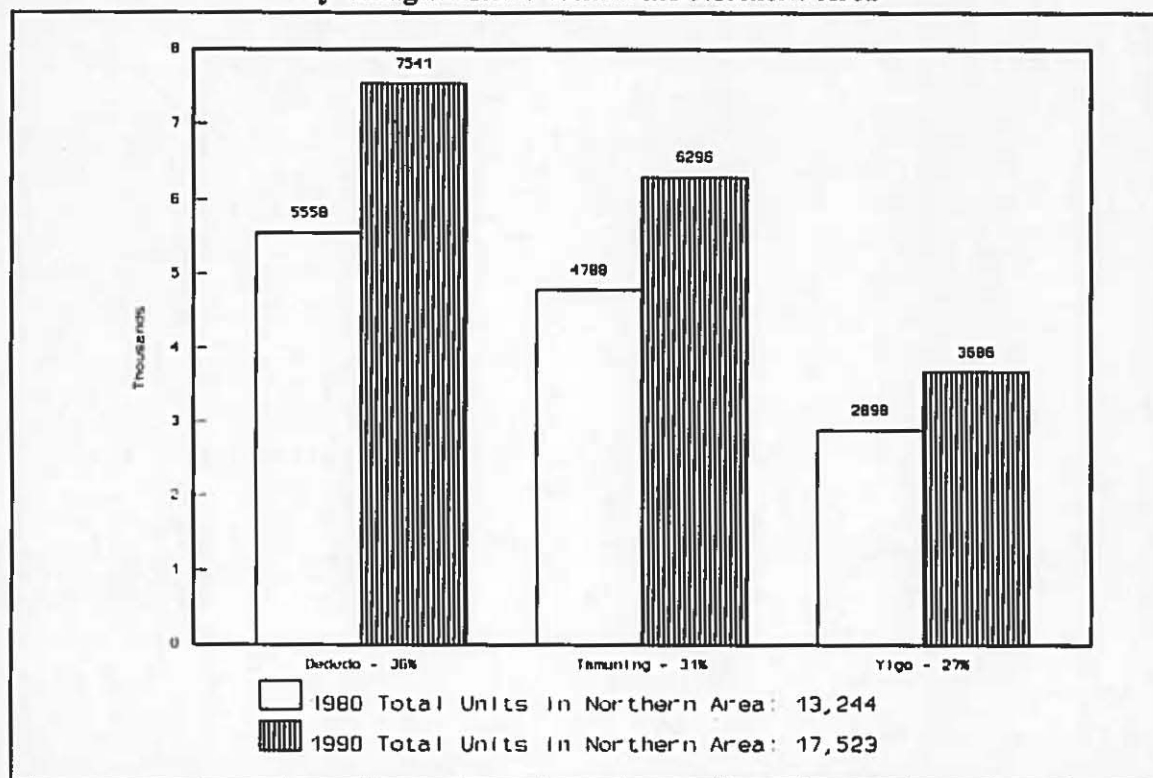
Table 20.3

**Total Number of Housing Units and Percent Change
By Village/District Within the Southern Area**



SOURCE:
Table 20.4

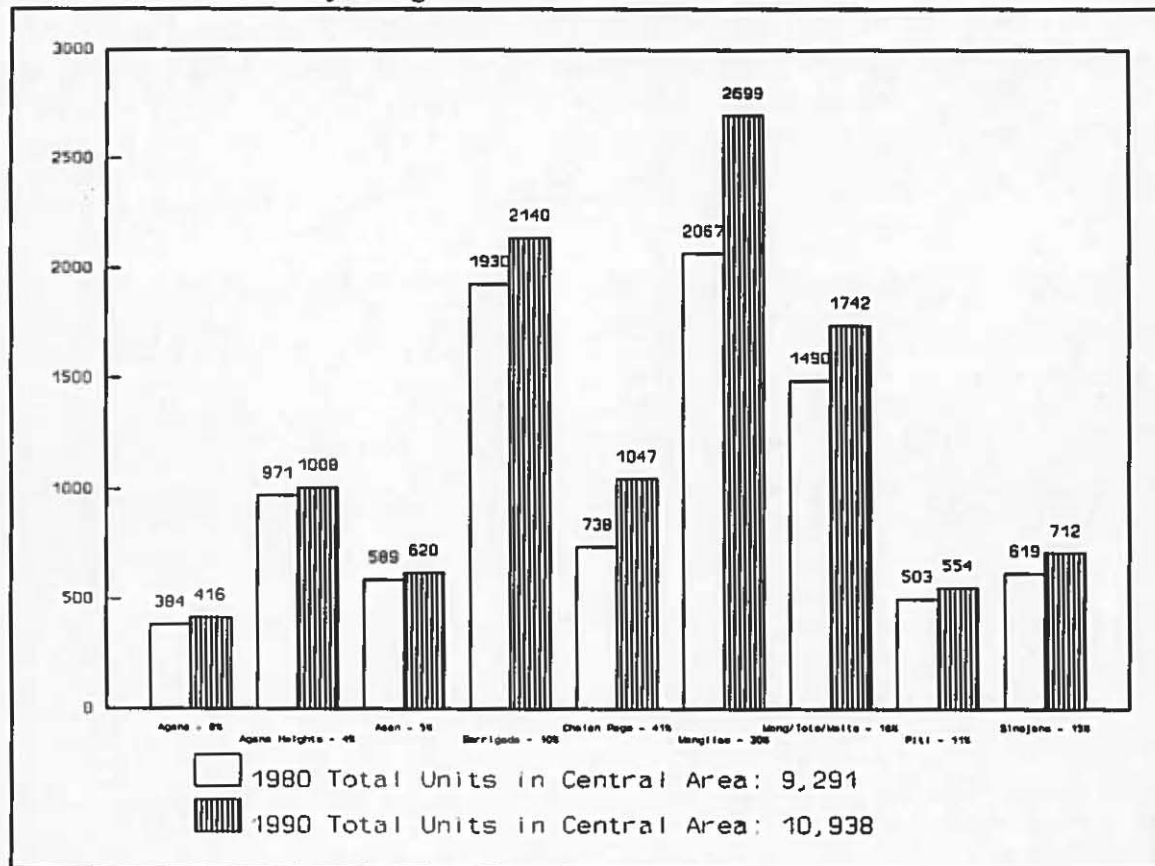
**Census Data, Department of Commerce
Total Number of Housing Units and Percent Change
By Village/District Within the Northern Area**



SOURCE: Census Data Department of Commerce

Table 20.5

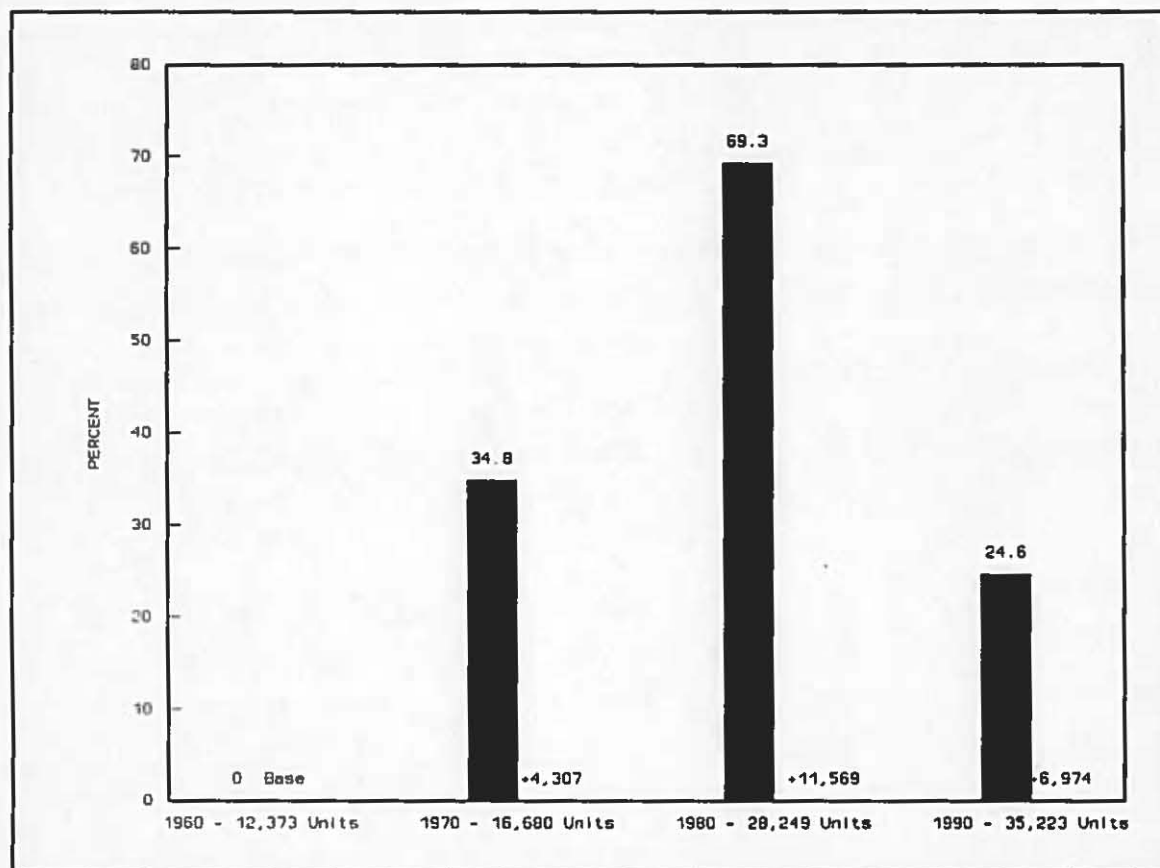
**Total Number of Housing Units and Percent Change
By Village/District Within the Central Area**



SOURCE: Census Data Department of Commerce

Table 20.6

Percent Change/Total Number Housing Units: 1960 to 1990



b) GHURA'S PUBLIC HOUSING AND RENTAL STOCK

Guam Housing and Urban Renewal Authority has 75 scattered low income public housing units found throughout the island in the following villages and/or districts:

Village	Units by Bedroom Size				Total
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4-6</u>	
1. Agana Heights	-0-	-0-	24	4	38
2. Agat	32	26	30	43	131
3. Asan	-0-	6	16	4	26
4. Dededo	33	24	39	20	116
5. Inarajan	-0-	8	9	11	28
6. Merizo	9	8	9	11	37
7. Mongmong	-0-	12	22	14	48
8. Sinajana	14	18	10	4	46
9. Talofofo	8	10	12	5	36
10. Toto	6	-0-	64	48	118
11. Umatac	-0-	8	8	11	27
12. Yona	-0-	20	60	20	100
Grand Total	<u>102</u>	<u>150</u>	<u>499</u>	<u>751</u>	

The above units are generally found within housing developments managed and maintained by GHURA on lands which have been deeded to GHURA and which are currently being rented by low income families who meet the eligibility criterion established by HUD.

GHURA also has 49 one bedroom units available for the elderly, known as Guma' Trankilidat which were funded through the Farmers Home Administration. It also has 75 units consisting of 26 (one bedroom), 48 (2 bedrooms) and 1 (3 bedrooms) housing under Section 8. All of the above units are described as its project based tenant assistance program.

Under it's Tenant Based Assistance Program, GHURA has a housing stock of 1,423 consisting of 248 (1 bedroom), 743 (2 bedroom) 432 (3 or more bedrooms) inventory. These are units secured from the private sector through a certificate and voucher system. (See Table 21.0 for a breakdown.)

Guam Housing Corporation has 115 apartment units called Lada Gardens which it leases at below market rate to families. These units are located next the Wettingal. It also has a 1 (3 bedroom) unit in GHURA 500 which again is being rented at below fair market rent.

The occupancy rate for GHURA's 75 low-income public housing units ranges from 82.3% to 96.6%. The occupancy rate for GHURA's Existing Program is 86.2% for the voucher program is 80.4%, Voucher Program in Tumon Village is 39.4%, 26.7% for Mod Rehab and 100% for the elderly Guma Trankilidat. (See Table 21.0 for a breakdown.)

CHAS Table 2C

U.S. Department of Housing and Urban Development
Office of Community Planning and Development

ASSISTED HOUSING INVENTORY

Comprehensive Housing Affordability Strategy (CHAS)

Name of Jurisdiction(s) or Consortium:				Five Year Period (enter fiscal yrs.)	through FY:
				FY:	
				Current Estimate as of: (enter date)	
Category	Total Stock and Inventory				
	Total (A)	SRO (B)	0 or 1 bedrooms (C)	2 bedrooms (D)	3 or more bedrooms (E)
1. Project Based Tenant Assistance	875		177	198	500
2. Public Housing	751		102	150	499
3. Section 202	-0-		-0-	-0-	-0-
4. Section 8	75		26	48	1
5. Other HUD					
6. FmHA	49		49	-0-	-0-
7. Tenant Based Tenant Assistance	1,423		248	743	432
8. Section 8	1,423		248	743	432
9. Other State/Local					
10. Homeowner Assistance	-0-		-0-	-0-	-0-

form HUD-40090 (5/16/91)

SECTION 8 PROGRAMS (CERTIFICATES AND VOUCHERS)
AS OF MARCH 20, 1992

Program	Bedroom Size															Total		Occ Rate	Total Allocation
	1 B/R			2 B/R			3 B/R			4 B/R			5 B/R			Alloc.	Net Alloc.		
	Total Avail.	Total Alloc.	Occ Rate	Total Avail.	Total Alloc.	Occ Rate	Total Avail.	Total Alloc.	Occ Rate	Total Avail.	Total Alloc.	Occ Rate	Total Avail.	Total Alloc.	Occ Rate				
Existing Program	248	248	100.0	588	495	84.2	316	285	90.2	97	56	57.7	19	9	47.4	1093	175	86.2	1268
Voucher Program	0	0		51	41	80.4	0	0		0	0		0	0		41	10	80.4	51
Voucher Program (Tucson Village)	0	0		104	41	39.4	0	0		0	0		0	0		41	63	39.4	104
Med Rehab	26	7	26.9	48	13	27.1	0	0		1	0	0.00	0	0		20	55	26.7	75
Elderly (Gunn's Transitions)	49	49	100.0	0	0		0	0		0	0		0	0		49	0	100.0	49
Occupancy Rate by Bedroom Size	323	304	94.1	791	590	74.6	316	285	90.2	98	56	57.1	19	9	47.4	1244	303	80.4	1547

PART 2

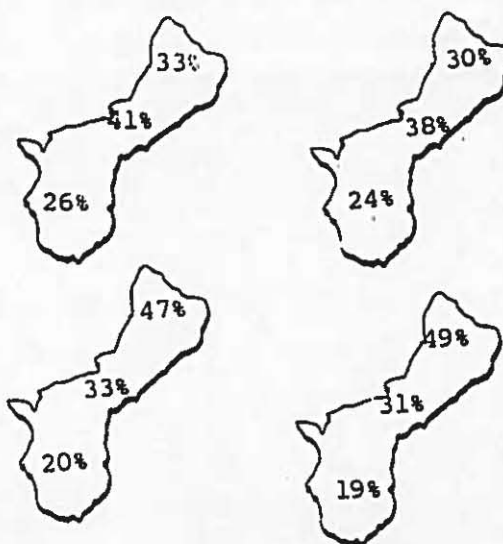
2. DESCRIPTION OF HOUSING SUPPLY ON GUAM FROM EARLY PERIOD TO 1980

a) OCCUPANCY AND VACANCY CHARACTERISTICS

The geographic distribution of houses on Guam has changed markedly in the last 20 years (Table 14.1). In 1960, the Central region accounted for 41 percent of the houses on the island, the South held 26 percent, and the North had 33 percent of all houses. In 1970, the North was the only region that recorded a growth in proportion of houses located there; both the Central and Southern regions, while increasing in the number of houses, decreased in the percent located there. The situation remained the same in 1980: the proportion of homes in the North grew by 19 percent over 1970 levels, while the Central and Southern regions decreased by 11 and 15 percent, respectively.

North
Central
South

North
Central
South



Distribution of Housing Islandwide

Table 14.1 Housing Distribution By Region and Election District: 1960 to 1980

Geographic Area	Numbers			Percent			Percent Change		1970-1960-
	1980	1970	1960	1980	1970	1960	1980	1970	
Total	28249	16680	12373	100.0	100.0	100.0	69.4	34.8	
North	13244	6559	4105	46.9	39.3	33.2	101.9	59.8	
Dededo	5558	2295	1176	19.7	13.8	9.5	142.2	95.2	
Tamuning	4788	2208	1390	16.9	13.2	11.2	116.8	58.8	
Yigo	2898	2056	1539	10.3	12.3	12.4	41.0	33.6	
Central	9291	6153	5029	32.9	36.9	40.6	51.0	22.4	
Agana	384	515	331	1.4	3.1	2.7	-25.4	55.6	
Agana Hts	971	669	689	3.4	4.0	5.6	45.1	-2.9	
Asan	589	581	602	2.1	3.5	4.9	1.4	-3.5	
Barrigada	1930	1307	1110	6.8	7.8	9.0	47.7	17.7	
Chalan Pago-									
Ordot	738	526	304	2.6	3.2	2.5	40.3	73.0	
Mangilao	2067	740	355	7.3	4.4	2.9	179.3	108.5	
Mongmong-Toto-									
Maite	1490	896	667	5.3	5.4	5.4	66.3	34.3	
Piti	503	239	275	1.8	1.4	2.2	110.5	-13.1	
Sinajana	619	680	696	2.2	4.1	5.6	-9.0	-2.3	
South	5714	3968	3239	20.2	23.8	26.2	44.0	22.5	
Agat	990	819	587	3.5	4.9	4.7	20.9	39.5	
Inarajan	455	321	269	1.6	1.9	2.2	41.7	19.3	
Merizo	398	271	234	1.4	1.6	1.9	46.9	15.8	
Santa Rita	2253	1610	1356	8.0	9.7	11.0	39.9	18.7	
Talofofo	445	350	208	1.6	2.1	1.7	27.1	68.3	
Umatac	147	130	110	.5	.8	.9	13.1	18.2	
Yona	1026	467	475	3.6	2.8	3.8	119.7	-1.7	

SOURCE: U.S. Bureau of the Census 1960 Census of Housing Volume I Part 9 Table 1; HC(1)-A54 1970 Table 1; HC80-1-A54 1980 Table 1.

The total number of persons in occupied housing units grew from 55,140 in 1960 to 75,233 in 1970 to 101,000 in 1980 (83 percent increase in 20 years) (Table 14.2). The Northern region grew the most: 81 percent between 1960 and 1970, and 66 percent between 1970 and 1980. The Central region grew the least: 18 percent between 1960 and 1970, and 14 percent between 1970 and 1980. The change in the distribution of persons in occupied housing units follows that of the distribution of housing units shown in Table 14.1: growth in the North, decline on the Central and Southern regions.

Table 14.2 Distribution of Persons in Occupied Housing Units by Region and Election District: 1960 to 1980

Geographic Area	Numbers			Percent		
	1980	1970	1960	1980	1970	1960
Persons in occpd units	101000	75233	55140	100.0	100.0	100.0
North	45930	27728	15311	45.5	36.9	27.8
Dededo	23318	9941	4634	23.1	13.2	8.4
Tamuning	13225	9062	5443	13.1	12.0	9.9
Yigo	9387	8725	5234	9.3	11.6	9.5
Central	32154	28253	23926	31.8	37.6	43.4
Agana	885	1809	1433	.9	2.4	2.6
Agana Hts	3148	2889	3003	3.1	3.8	5.4
Asan	1999	2604	2593	2.0	3.5	4.7
Barrigada	7169	6224	5422	7.1	8.3	9.8
Chalan Pago-Ordot	3107	2885	1735	3.1	3.8	3.1
Mangilao	6622	3095	1532	6.6	4.1	2.8
Mongmong-Toto-Maite	5215	4005	2929	5.2	5.3	5.3
Piti	1524	1247	1417	1.5	1.7	2.6
Sinajana	2485	3495	3862	2.5	4.6	7.0
South	22916	19252	15903	22.7	25.6	28.8
Agat	3978	4200	3097	3.9	5.6	5.6
Inarajan	2043	1879	1730	2.0	2.5	3.1
Merizo	1651	1518	1389	1.6	2.0	2.5
Santa Rita	8311	6386	5277	8.2	8.5	9.6
Talofofo	1980	1884	1352	2.0	2.5	2.5
Umatac	732	813	744	.7	1.1	1.3
Yona	4221	2572	2314	4.2	3.4	4.2

SOURCE: U. S. Bureau of the Census General Population Characteristics 1960 Table 26; HC(1)-A54 1970 Table 1; HC80-1-A54 1980 Table 2.

There were 4.83 persons per occupied unit in 1970, compared to 4.07 persons in 1980, a 16 percent decrease (Table 14.3). Nearly 88 percent of the total population were in occupied units in 1970; 12 percent were in group quarters. Only 5 percent were in group quarters in 1980, a decrease of 49 percent. The proportion of persons in occupied units grew by 34 percent between 1970 and 1980.

Table 14.3 Occupancy Characteristics: 1970 and 1980

Occupancy Characteristics	Number		Percent		Change
	1980	1970	1980	1970	
Total persons	105979	84996	100.0	100.0	24.7
Persons in occupied units	101000	75233	95.3	88.5	34.2
Per occupied unit	4.07	4.83	.....	.....	-15.7
Group quarters	4979	9763	4.7	11.5	-49.0

SOURCE: U. S. Bureau of the Census HC(1)-A54 1970 Table 1; HC80-1-A54 1980 Table 2; HC80-1-B54 1980 Table 15.

Off-base housing made up 83 percent of all occupied housing units in 1980 (Table 14.4). Both off- and on-base housing was primarily rented: 54 percent of off-base and 98 percent of on-base units were renter-occupied. There were 3.51 persons per occupied housing unit in on-base housing and 4.19 per off-base unit. There were more persons per unit in owner-occupied units for off-base houses (4.87) than for on-base (2.58), but for renter-occupied houses the reverse was true: on-base rental units had 3.51 persons per unit to 3.32 persons for off-base homes.

Table 14.4 Occupancy Characteristics and Tenure By Persons Living In On-base and Off-base Housing: 1980

Occupancy	Total	Number		Total	Percent	
		Offbse Hsing	Onbse Hsing		Offbse Hsing	Onbse Hsing
Occupied housing units . .	24834	20478	4356	100.0	100.0	100.0
Owner occupied units	11469	11457	12	46.2	55.9	.3
Renter occupied units	13365	9021	4344	53.8	44.1	99.7
Persons in occpd units . .	101000	85713	15287	100.0	100.0	100.0
Owner occupied unit	55811	55780	31	55.3	65.1	.2
Renter occupied unit	45189	29933	15256	44.7	34.9	99.8
Persons per occpd unit . .	4.07	4.19	3.51	(X)	(X)	(X)
Owner occupied	4.07	4.87	2.58	(X)	(X)	(X)
Renter occupied	3.38	3.32	3.51	(X)	(X)	(X)

SOURCE: U. S. Bureau of the Census HC-80-1-A54 1980 Tables 2 and 5.

Slightly over 91 percent of housing in military bases was occupied in 1980, most (over 99 percent) was rented (Table 14.5). The highest rate of occupancy was at Agana Station at 99 percent; the lowest was at Marbo Annex (80 percent). Nearly all of the units that were rented were done so for no cash rent.

Table 14.5 Housing on Military Base Areas: 1980

Military Base Areas	Total	Occupied	Rented	No cash rent	
				Number	Percent
On-base housing units	4771	4356	4344	4236	97.2
Agana Hts. Naval Hospital	71	68	68	66	97.1
Agana Station	487	483	483	465	96.3
Andersen Air Force Base	1396	1135	1131	1126	99.2
Apra Harbor	1432	1381	1374	1332	96.5
Finegayan	874	857	856	852	99.4
Marbo Annex	363	292	292	271	92.8
Nimitz Hill Annex	148	140	140	124	88.6

SOURCE: U. S. Bureau of the Census HC80-1-A54 1980 Table 5.

Of all occupied housing units in 1970, 54 percent were occupied by renters: nearly 7 percent for no cash rent (Table 14.6). In both 1970 and 1980, 9 percent of occupied housing units were vacant for sale only. Those units vacant for rent only in 1970 made up 38 percent of all vacant housing units, in 1980 this rose to 41 percent. Units vacant for other reasons made up 53 percent of all vacant housing units in 1970, but only 32 percent of units in 1980.

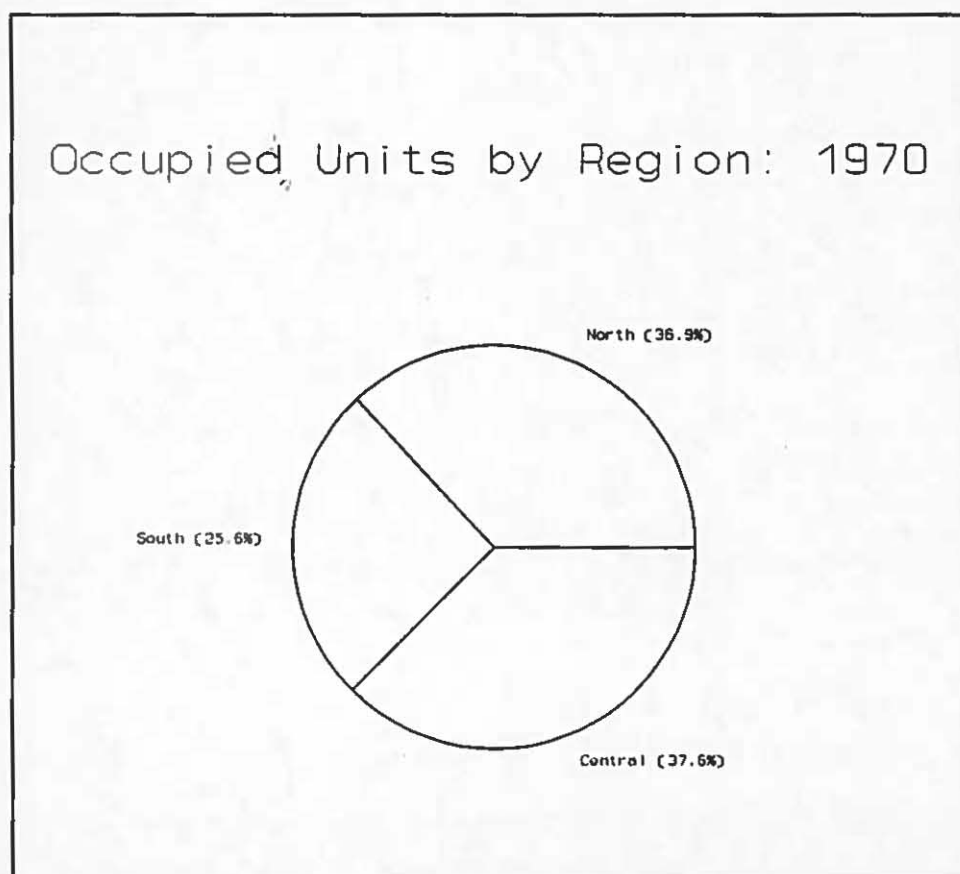
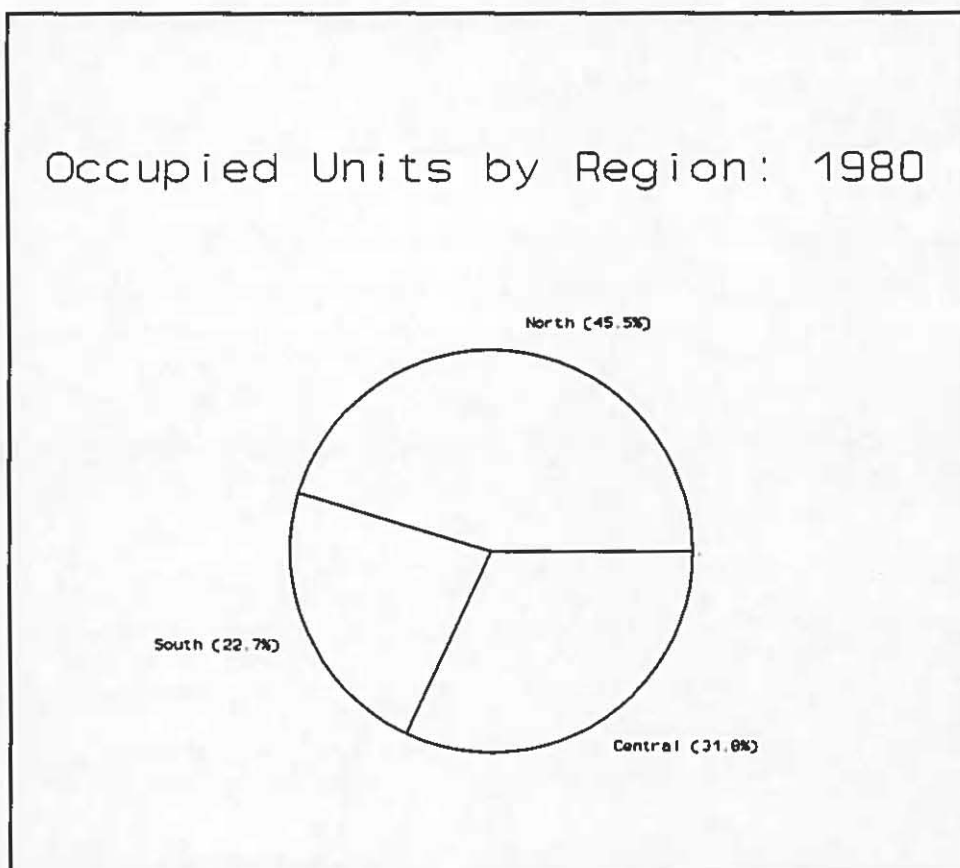
Table 14.6 Tenure: 1970 and 1980

Tenure	Number		Percent	
	1980	1970	1980	1970
Occupied housing units	24834	15569	100.0	100.0
Owner occupied housing	11469	7165	46.2	46.0
Percent of occupied housing	46.2	46.0	...	...
Renter occupied housing	13365	8404	53.8	54.0
No cash rent	5704	1070	23.0	6.9
Vacant housing units	3257	1107	100.0	100.0
Vacant for sale only	276	100	8.5	9.0
Homeowner vacancy rate	2.3	1.4	...	...
Vacant for sale 6 or more mos	65	...	2.0	...
With complete plumbing	253	...	7.8	...
Vacant for rent	1347	421	41.4	38.0
Rental vacancy rate	9.2	4.8	...	...
Vacant for rent 2 or more mos	916	...	18.9	...
With complete plumbing	1328	...	40.8	...
Held for occasional use	198	...	6.1	...
Rented or sold awaiting occupant	404	...	12.4	...
Other vacant	1032	586	31.7	52.9
Boarded up	85	...	2.6	...

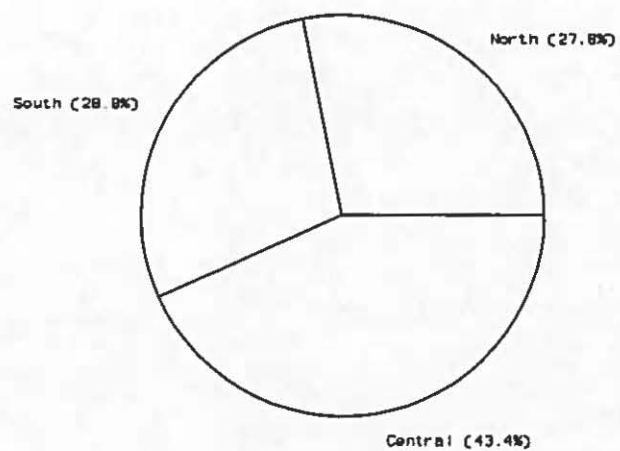
SOURCE: U. S. Bureau of the Census HC(1)-A54 1970 Table 1; HC80-1-A54 1980 Table 2; Summary Tape File 1A 1980 Tables 53 and 54.

Of those units that were vacant for sale only in 1980, over 23 percent had been vacant for 6 or more months. The rate was nearly twice as high for units that were vacant for rent only for 2 or more months. Those units that were vacant for sale only had complete plumbing in 92 out of 100 homes; those vacant for rent only had complete plumbing in nearly 99 of 100 homes.

Figure 14.1 Occupied Units by Region: 1960 to 1980 (Percent)



Occupied Units by Region: 1960



b) UTILIZATION CHARACTERISTICS

In 1980, 55 percent of all occupied housing units were owner-occupied; the remaining 45 percent were rental units (Table 14.7). Of all rental units, 67 percent were single-family homes, 8 percent were duplexes, less than 1 percent were mobile homes or trailers. Structures with 3 or more units comprised the final 25 percent of rental units. Owner-occupied homes were mainly single-family homes (96 percent) or duplexes (3 percent) with just over 2 percent being structures with 3 or more units.

Table 14.7 **Persons in Occupied Housing Units by Owner/Renter Status by Units in Structure: 1980**

Units in Structure	1980	Percent of Total	Percent
Total persons in housing	101000	100.0	...
1, detached	68439	67.8	...
1, attached	14439	14.3	...
2	4935	4.9	...
3 or 4	3496	3.5	...
5 or more	8951	8.9	...
Mobile home or trailer	715	.7	...
Boat	25	0.0	...
Persons in rental units	45189	44.7	100.0
1, detached	17187	17.0	38.0
1, attached	12928	12.8	28.6
2	3565	3.5	7.9
3 or 4	2817	2.8	6.2
5 or more	8309	8.2	18.4
Mobile home or trailer	378	.4	.8
Boat	5	0.0	0.0
Persons in owner occ units	55811	55.3	100.0
1, detached	51252	50.7	91.8
1, attached	1511	1.5	2.7
2	1370	1.4	2.5
3 or 4	679	.7	1.2
5 or more	642	.6	1.2
Mobile home or trailer	337	.3	.6
Boat	20	0.0	0.0

SOURCE: Bureau of the Census Summary Tape File 3A Table 104.

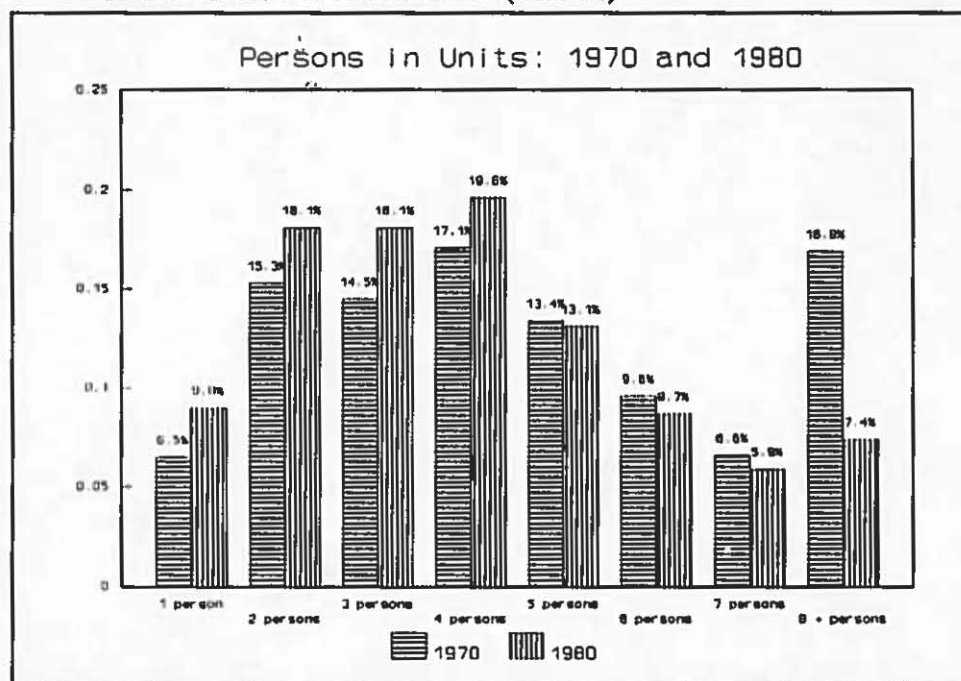
In 1970, the category of number of persons in housing units that had the highest frequency was that of 4 persons per unit, followed by 8 or more persons per unit (Table 14.8). By 1980, this had changed only somewhat: 4 persons per room still had the highest percentage, but the second most frequent number of persons per unit was shared with 2 and 3 persons. The category of 1 person per unit showed the greatest change between 1970 and 1980: it increased by 119 percent. The number of houses with 8 or more persons per unit had the greatest decline: this category went from 17 percent of housing units in 1970 to only 7 percent in 1980.

Table 14.8 Persons in Units: 1970 and 1980

Persons in Units	Number		Change From 1970 to 1980	Percent	
	1980	1970		1980	1970
Total	24834	15569	59.5	100.0	1000
1 person	2226	1015	119.3	9.0	6.5
2 persons	4503	2375	89.6	18.1	15.3
3 persons	4499	2264	98.7	18.1	14.5
4 persons	4866	2661	82.9	19.6	17.1
5 persons	3263	2093	55.9	13.1	13.4
6 persons	2156	1493	44.4	8.7	9.6
7 persons	1474	1033	42.7	5.9	6.6
8 or more persons	1847	2635	-29.9	7.4	16.9
Median	3.7	4.6	...	...	...

Source: U.S. Bureau of the Census HC80-1-A54, 1980 Table 3; HC(1)-A54, 1970, Table 1.

Figure 14.2 Persons in Units: 1970 and 1980 (Percent)



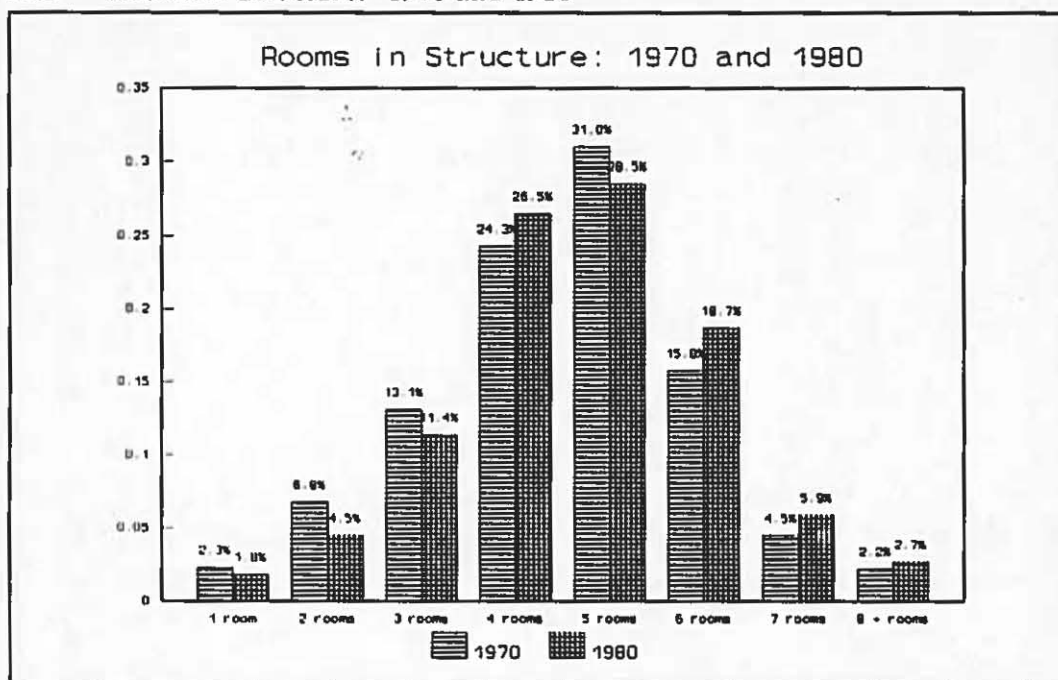
Most housing structures had between 4 and 5 rooms in both 1970 and 1980 (Table 14.9). Fully 31 percent of structures had 5 rooms in 1970; this decreased to 29 percent in 1980. Over 24 percent of houses had 4 rooms in 1970, rising to 36 percent in 1980, an increase of over 83 percent in the number of homes with 4 rooms. The categories that showed the greatest increases between 1970 and 1980 were those of 7 and 8 or more rooms: the number of units with 7 rooms increased by 120 percent; those with 8 or more rooms grew by 113 percent. No categories decreased during this time.

Table 14.9 Rooms in Structure: 1970 and 1980

Rooms	Number		From 1970 to 1980	Change Percent	
	1980	1970		1980	1970
Total	28091	16676	68.5	100.0	100.0
1 room	512	386	32.6	1.8	2.3
2 rooms	1264	1141	10.8	4.5	6.8
3 rooms	3195	2181	46.5	11.4	13.1
4 rooms	7437	4055	83.4	26.5	24.3
5 rooms	8000	5162	55.0	28.5	31.0
6 rooms	5251	2635	99.0	18.7	15.0
7 rooms	1662	755	120.1	5.9	4.5
8 or more rooms	770	361	113.3	2.7	2.2
Median	4.7	4.6	2.2	...	...

Source: U.S. Bureau of the Census HC80-1-A54, 1980 Table 3; HC(1)-A54, 1970, Table 2.

Figure 14.3 Rooms in Structure: 1970 and 1980



Along with the change in the number of persons per unit, the number of persons per room also changed (Table 14.10). In 1960, the category of persons per room with the highest percentage was that of "0.75 persons or less per room". In 1970, this had changed to "0.76 to 1.00 persons per room". However, there were additional categories equal to "0.75 persons per room or less", compared to that category for 1960, would be greater than 35 percent and higher than that of 1960, showing an increase in that category over the intervening 10 years.

By 1980, the highest single category of persons per room was that of "0.50 or less". Again, when categories are combined to make "0.75 or less", the percentage rose to 51, an increase of 15 percentage points over 10 years.

Owner-occupied units had more persons per room in all 3 Census years than did renter-occupied units. In 1960, the greatest frequency for owner-occupied units was "1.51 or more" persons per room; for renters it was "0.51 to 0.75" persons per room. In 1970, the category for the owners had not changed, but renters had shifted to "0.76 to 1.00" persons per room. In 1980, owners had moved to the category of "0.76 to 1.00" but renters had moved down to 0.5" or less" persons per room.

Table 14.10 Persons per Room: 1960 to 1980

Persons per Room	Numbers			Percent		
	1980	1970	1960	1980	1970	1960
Year-round units	24834	15569	10830	100.0	100.0	100.0
0.50 or less	6678	2884	(X)	26.9	18.5	...
0.51 to 0.75	5882	2634	3631	23.7	16.9	33.5
0.76 to 1.00	6218	4101	2959	25.0	26.3	27.3
1.01 to 1.50	3732	2644	1894	15.0	17.0	17.5
1.51 or more	2324	3306	2270	9.4	21.2	21.0
Not reported	...	...	76	...	...	.7
Owner-occupied units	11469	7165	5028	100.0	100.0	100.0
0.50 or less	2431	991	(X)	21.2	13.8	...
0.51 to 0.75	2020	786	1089	17.6	11.0	21.7
0.76 to 1.00	3060	1402	876	26.7	19.6	17.4
1.01 to 1.50	2427	1549	1177	21.2	21.6	23.4
1.51 or more	1531	2437	1855	13.3	34.0	36.9
Not reported	...	...	31	...	...	.6
Renter-occupied units	13365	8404	5802	100.0	100.0	100.0
0.50 or less	4247	1893	(X)	31.8	22.5	...
0.51 to 0.75	3862	1848	2542	28.9	22.0	43.8
0.76 to 1.00	3158	2699	2083	23.6	32.1	35.9
1.01 to 1.50	1305	1095	717	9.8	13.10	12.4
1.51 or more	793	869	415	5.9	10.3	7.2
Not reported	...	...	45	...	...	.7

Note: (X) indicates persons per room is 0.75 or less in 1960.

SOURCE: U. S. Bureau of the Census HC-1-A54 1980 Table 3; HC(1)-A54 1970 Table 2; Census of Housing Part 9 Chapter 54 1960 Table 1.

c) PLUMBING CHARACTERISTICS

The plumbing and sewage facilities available to island residents are not only important for those concerned with housing, but to Public Health officials as well. Lack of clean, uncontaminated water, and improper disposal of sewage can lead to epidemic of such diseases as Salmonella and Shigella. Guam has recorded several deaths from these diseases in the past. Fortunately, the majority of housing units in both 1970 and 1980 had complete plumbing facilities: 81 percent in 1970, and 96 percent in 1980 (Table 14.11). In 1970, 64 percent of units had complete plumbing with both hot and cold piped water, as did to 84 percent in 1980, a 31 percent increase in the proportion of units with complete plumbing. Only 17 percent of year round units had incomplete plumbing in 1970; this further decreased to 4 percent in 1980. Renter-occupied units had higher proportions of homes with complete plumbing than did owner-occupied units in both 1970 and 1980.

Table 14.11 Plumbing Facilities: 1970 and 1980

Plumbing Facilities	Number		Percent	
	1980	1970	1980	1970
Total year-round units	28091	16676	100.0	100.0
Complete plumbing	26919	13530	95.8	81.1
With hot and cold piped water	23689	10729	84.3	64.3
With only cold piped water	3230	2801	11.5	16.8
Lacking complete plumbing	1172	3146	4.2	18.9
Owner occupied units	11469	7165	100.0	100.0
Complete plumbing	10902	4950	95.1	69.1
With hot and cold piped water	9083	3216	79.2	44.9
With only cold piped water	1819	1734	15.9	24.2
Lacking complete plumbing	567	2215	4.9	30.9
Renter occupied units	13365	8404	100.0	100.0
Complete plumbing	13052	7647	97.7	91.0
With hot and cold piped water	12098	6716	90.5	79.9
With only cold piped water	954	931	7.1	11.1
Lacking complete plumbing	313	757	2.3	9.0

SOURCE: U. S. Bureau of the Census HC(1)-A54 1970 Table 3; HC80-1-A54 1980 Table 2.

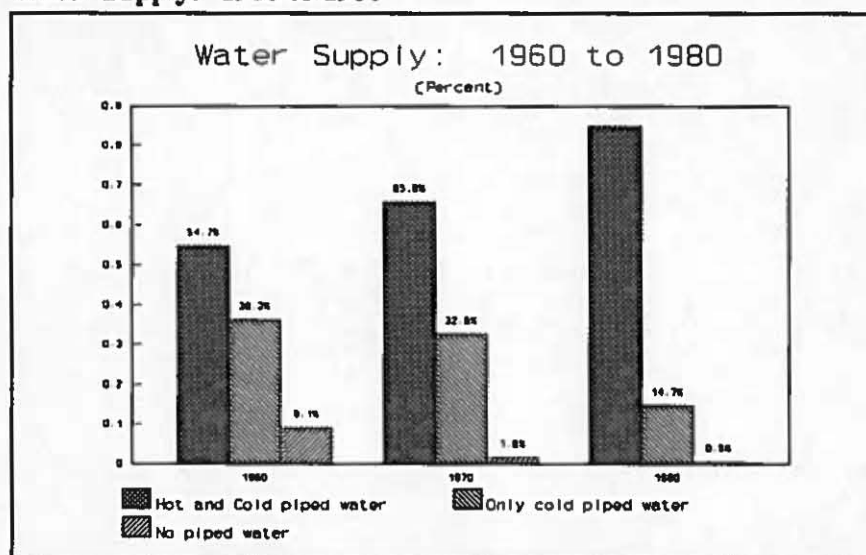
Water supply is also an important health concern (Table 14.12). In 1960, nearly 55 percent of all year-round units had both hot and cold piped water. This proportion rose to over 65 percent in 1970, and nearly 85 percent in 1980. An additional 36 percent of units had only cold piped water in 1960, and 9 percent had no piped water at all. This last category had fallen to only one-half of one percent by 1980. Renter-occupied units had higher proportions with both hot and cold piped water in all 3 Census years. It should be remembered that most on-base housing was renter-occupied, and that such housing was constructed to different standards than local housing: those living on-base demanded amenities.

Table 14.12 Water Supply: 1960 to 1980

Water Supply	Numbers			Percent		
	1980	1970	1960	1980	1970	1960
Year-round units	28091	16676	12373	100.0	100.0	100.0
Hot and cold piped water	23808	10966	6770	84.8	65.8	54.7
Only cold piped water	4141	5440	4474	14.7	32.6	36.2
No piped water	142	270	1129	.5	1.6	9.1
Owner-occupied units	11469	7165	5028	100.0	100.0	100.0
Hot and cold piped water	9138	3357	1027	79.7	46.9	20.4
Only cold piped water	2307	3654	3378	20.1	51.0	67.2
No piped water	24	154	623	.2	2.1	9.1
Renter-occupied units	13365	8404	5802	100.0	100.0	100.0
Hot and cold piped water	12140	6802	4771	90.8	80.9	82.2
Only cold piped water	1196	1551	856	8.9	18.5	14.8
No piped water	29	51	178	.2	.6	3.0

SOURCE: U. S. Bureau of the Census, Census of Housing Part 9 Chapter 54 1960 Table 3; HC(1)-A54 1970 Table 3; HC80-1-A54 1970 Table 3 HC-1-A54 1980 Table 2.

Figure 14.4 Water Supply: 1960 to 1980



Toilet facilities are another important health-related amenity (Table 14.13). Flush toilets were present in over 69 percent of year-round units in 1960, and by 1980, in nearly 98 percent of units. The majority were inside the building. Outhouses or privies were present in 30 percent of housing units in 1960, but only 2 percent by 1980. Very few units had no facilities in 1960, but 3 percent in 1970 had facilities, then decreased to less than 1 percent in 1980. As with water supply, renter-occupied units had higher rates of toilet facilities than did owner-occupied units in all 3 Censuses.

Table 14.13 Toilet Facilities: 1960 to 1980

Toilet Facilities	Numbers			Percent		
	1980	1970	1960	1980	1970	1960
Year-round units	28091	16676	12373	100.0	100.0	100.0
Flush toilet	27377	14043	8577	97.5	84.2	69.3
Inside this building	27120	13851	8390	96.5	83.1	67.8
Outside this building	257	192	187	.9	1.2	1.5
Outhouse or privy	545	2076	3773	1.9	12.4	30.5
Other or none	169	557	23	.6	3.3	.2
Owner-occupied units	11469	7165	5028	100.0	100.0	100.0
Flush toilet	11154	5277	2301	97.3	73.6	45.8
Inside this building	11002	5143	2163	95.9	71.8	43.0
Outside this building	152	134	138	1.3	1.9	2.7
Outhouse or privy	287	1534	2713	2.5	21.4	54.0
Other or none	28	354	14	.2	4.9	.3
Renter-occupied units	13365	8404	5802	100.0	100.0	100.0
Flush toilet	13185	7812	5183	98.7	93.0	89.3
Inside this building	13110	7759	5141	98.1	92.3	88.6
Outside this building	75	53	42	.6	.6	.7
Outhouse or privy	131	468	610	1.0	5.6	10.5
Other or none	49	124	9	.4	1.5	.2

SOURCE: U. S. Bureau of the Census, Census of Housing Part 9 Chapter 54 1960 Table 3; HC(1)-A54 1970 Table 3; HC80-1-A54 1970 Table 3 HC-1-A54 1980 Table 2.

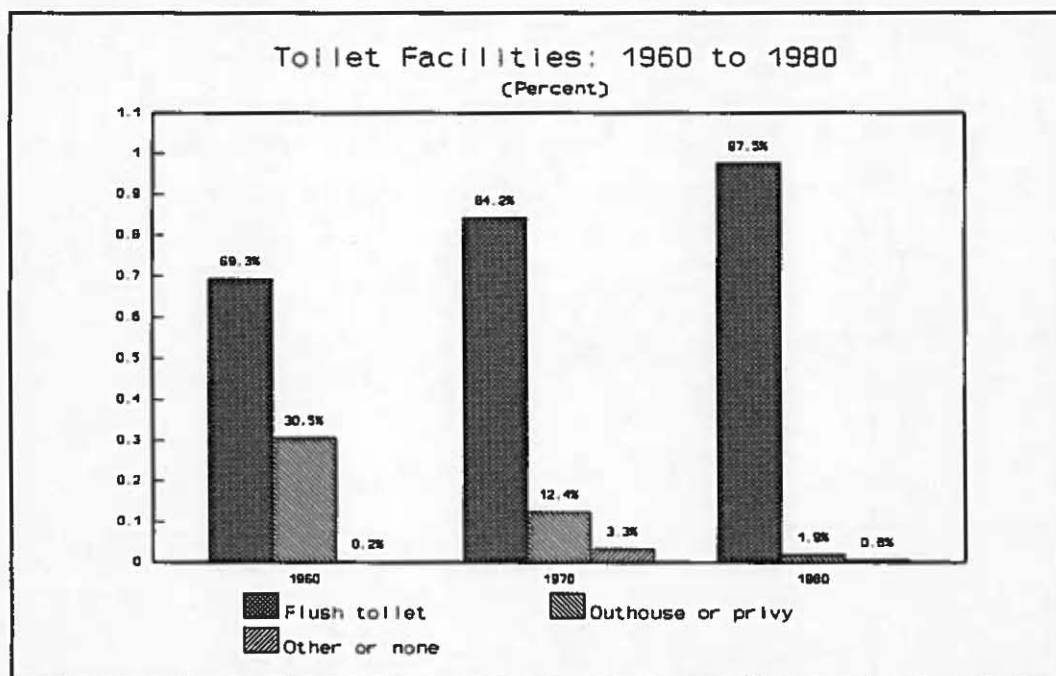
Tank-type water heaters were present in nearly 85 percent of all housing units in 1980, and in nearly 86 percent of occupied units (Table 14.4). Owner-occupied housing units had the lowest percentage of tank-type water heaters at 80 percent. Electricity was the fuel most commonly used to operate these heaters, followed by gas. Very few water heaters were powered by solar energy, and the majority of these were in owner-occupied units.

Table 14.14 Energy Used by Tank-type Water Heaters by Region: 1980

Energy Type	Number				Percent			
	Total	North	Cntrl	South	Total	North	Cntrl	South
No tank-type wtr heater .	3556	1141	1283	1132	14.3	9.8	15.9	21.9
Total Units	28091	13175	9247	5669	100.0	100.0	100.0	100.0
Electricity	22745	11009	7484	4252	81.0	83.6	80.9	75.0
Gas	1008	775	178	55	3.6	5.9	1.9	1.0
Solar energy	50	12	17	21	.2	.1	.2	.4
Other fuels	5	3	2	0	0.0	.0	.0	0.0
No tank-type wtr heater .	4283	1376	1566	1341	15.2	10.4	16.9	23.7
Total occpd units . . .	24834	11595	8070	5169	100.0	100.0	100.0	100.0
Electricity	20296	9723	6610	3963	81.7	83.9	81.9	76.7
Gas	927	716	158	53	3.7	6.2	2.0	1.0
Solar energy	50	12	17	21	.2	.1	.2	.4
Other fuels	5	3	2	0	0.0	.0	.0	0.0
No tank-type wtr heater .	3556	1141	1283	1132	14.3	9.8	15.9	21.9
Renter-occpd units . .	13365	6651	4089	2625	100.0	100.0	100.0	100.0
Electricity	11832	6025	3572	2235	88.5	90.6	87.4	85.1
Gas	294	247	31	16	2.2	3.7	.8	.6
Solar energy	11	1	9	1	.1	.0	.2	.0
Other fuels	3	2	1	0	0.0	.0	.0	0.0
No tank-type wtr heater .	1225	376	476	373	9.2	5.7	11.6	14.2
Owner-occpd units . .	11469	4944	3981	2544	100.0	100.0	100.0	100.0
Electricity	8464	3698	3038	1728	73.8	74.8	76.3	67.9
Gas	633	469	127	37	5.5	9.5	3.2	1.5
Solar energy	39	11	8	20	.3	.2	.2	.8
Other fuels	2	1	1	0	0.0	.0	.0	0.0
No tank-type wtr heater .	2331	765	807	759	20.3	15.5	20.3	29.8

SOURCE: U. S. Bureau of the Census Summary Tape File 3A Table 114.

Figure 14.5 Toilet Facilities: 1960 to 1980



In 1970, 98 percent of year-round units used the public system as their source of water, as did over 99 percent in 1980 (Table 14.15). Less than 1 percent in both years got their water from catchments, tanks or drums, or from public standpipes or hydrants. The proportion of year-round units which relied on some other source for water fell from over 1 percent in 1970 to well below 1 percent in 1980.

Table 14.15 Source of Water: 1970 and 1980

Source of Water	Number		Percent	
	1980	1970	1980	1970
Year-round units	28091	16676	100.0	100.0
Public system	27972	16292	99.6	97.7
Individual well	9	2	0.0	0.0
Catchment, tanks, drums	34	75	.1	.4
Public standpipe, hydrant	9	60	0.0	.4
Some other source	67	247	.2	1.5

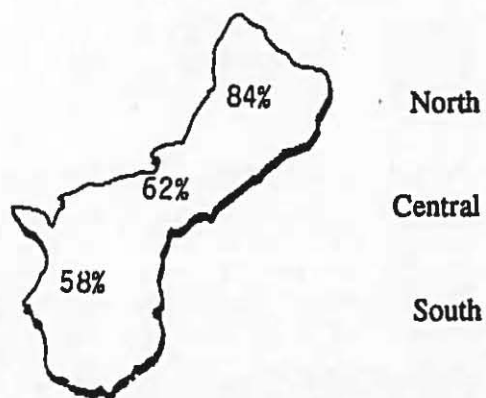
SOURCE: U. S. Bureau of the Census HC80-1-B54 1980 Table 10; HC(1)-B54 1970 Table 4.

Table 14.16 Sewage Disposal By Election District: 1980

Sewage Disposal	Number				Percent			
	Total Units	Sewer	Septic Tank	Other Means	Total Units	Sewer	Septic Tank	Other Means
Total year round units	28091	20116	7124	851	100.0	100.0	100.0	100.0
North	13175	11061	1913	201	46.9	55.0	26.9	23.6
Dededo	5495	4610	754	131	19.6	22.9	10.6	15.4
Tamuning	4784	4336	423	25	17.0	21.6	5.9	2.9
Yigo	2896	2115	736	45	10.3	10.5	10.3	5.3
Central	9247	5751	3252	244	32.9	28.6	45.6	28.7
Agana	383	348	31	4	1.4	1.7	.4	.5
Agana Heights	971	818	144	9	3.5	4.1	2.0	1.1
Asan	587	393	179	15	2.1	2.0	2.5	1.8
Barrigada	1909	861	988	60	6.8	4.3	13.9	7.1
Chalan Pago-Ordot	734	111	560	63	2.6	.6	7.9	7.4
Mangilao	2054	1190	821	43	7.3	5.9	11.5	5.1
Mongmong-Toto-Maite	1490	1092	380	18	5.3	5.4	5.3	2.1
Piti	501	409	69	23	1.8	2.0	1.0	2.7
Sinajana	618	529	80	9	2.2	2.6	1.1	1.1
South	5669	3304	1959	406	20.2	16.4	27.5	47.7
Agat	979	727	182	70	3.5	3.6	2.6	8.2
Inarajan	452	17	340	95	1.6	.1	4.8	11.2
Merizo	395	2	322	71	1.4	0.0	4.5	8.3
Santa Rita	2246	1936	246	46	8.0	9.6	3.7	5.4
Talofofo	444	12	380	52	1.6	.1	5.3	6.1
Umatac	147	8	114	25	.5	0.0	1.6	2.9
Yona	1006	602	357	47	3.6	3.0	5.0	5.5

SOURCE: U. S. Bureau of the Census HC-1-B54 Table 10.

Disposal of sewage is also a Public Health concern, as mentioned earlier (Table 14.16). In 1980, 72 percent of all year-round units used a public sewer, 25 percent used a septic tank, and the remaining 3 percent used other means. The North had the highest proportion of units using a public sewer (84 percent), followed by the Central region at 62 percent, and the South, with 58 percent. In the North, 14 percent of units used a septic tank, and 2 percent used other means. In the South, 35 percent of units used septic tanks and over 7 percent used other means. The Central region had the greatest proportion of units using septic tanks, 35 percent, with the other 3 percent using other means.



Percent Using Sewer (Public)

Dededo was the village with the highest proportion of year-round units using public sewers; Merizo and Umatac the lowest. Barrigada had the greatest percentage of units using septic tanks; Agana the smallest. For those villages using other means, Dededo had the highest proportion, Agana the lowest.

d) STRUCTURAL CHARACTERISTICS

In 1970, 52 percent of all year-round units had been built in the decade 1960 to 1969, and 48 percent prior to 1960 (Table 14.17). In 1980, 70 percent of these units remained, but they accounted for only 41 percent of all year-round housing units; 59 percent had been built between 1970 and March 1980. As both periods had seen Guam ravaged by major typhoons (Karen in 1962 and Pamela in 1976), some of the units constructed after 1960 and after 1970 were built to replace those lost to storms. The majority, however, were constructed to accommodate the growing population.

Table 14.17 Year Structure Built: 1970 and 1980

Year Structure Built	Number		Percent	
	1980	1970	1980	1970
All year-round units	28091	16676	100.0	100.0
1979 to March 1980	1007	...	3.6	...
1975 to 1978	5036	...	17.9	...
1970 to 1974	10458	...	37.2	...
1960 to 1969	7566	8666	26.9	52.0
1950 to 1959	3268	5537	11.6	33.2
1940 to 1949	672	2251	2.4	13.5
1939 or earlier	84	222	.3	1.3

SOURCE: U. S. Bureau of the Census HC(1)A54 1970 Table 1; HC80-1-B54 1980 Table 9.

In the Northern region, the largest proportion - 41 percent - of all year-round units had been built between 1970 and 1974, followed by those built between 1960 to 1969 (Table 14.18). This was true for all regions except the South: the second most common period that houses were built in was from 1950 to 1959.

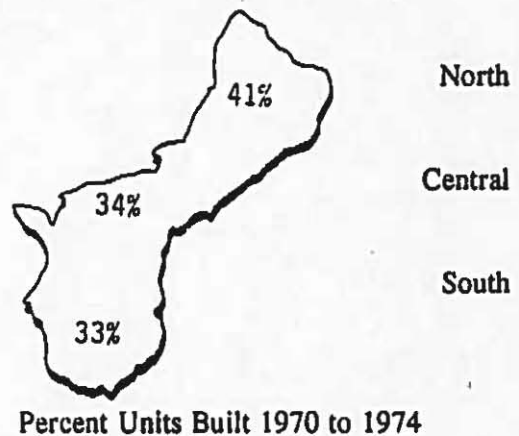


Table 14.18 Year Structure Built By Region: 1980

Year Built	Number				Percent			
	Total	North	Cntrl	South	Total	North	Cntrl	South
Year-round units . . .	28091	13175	9247	5669	100.0	100.0	100.0	100.0
1979 to March 1980 . . .	1007	518	330	159	3.6	3.9	3.6	2.8
1975 to 1978	5036	1926	1960	1150	17.9	14.6	21.2	20.3
1970 to 1974	10458	5401	3191	1866	37.2	41.0	34.5	32.9
1960 to 1969	7566	4127	2296	1143	26.9	31.3	24.8	20.2
1950 to 1959	3268	894	1198	1176	11.6	6.8	13.0	20.7
1940 to 1949	672	298	237	137	2.4	2.3	2.6	2.4
1939 or earlier	84	11	35	38	.3	.1	.4	.7

SOURCE: U. S. Bureau of the Census Summary Tape File 3A Table 109.

Single-family houses, both attached and detached, made up the majority of housing units in both 1970 and 1980 (74 percent), although there was a slight decrease in the proportion of single-family units in 1980 (Table 14.19). The percentage of double-family units ("duplexes") decreased sharply between 1970 and 1980, from 19 percent to 5 percent, a 73 percent decrease. This decrease was balanced by an increase in the proportion of multiple-family housing units: in 1970, structures with 3 or more family units accounted for 7 percent of all year-round units, and by 1980, had grown to 20 percent. Structures with 10 or more units made up 62 percent of this subgroup in 1980, but only 29 percent of it in 1970. Buildings with 50 or more unit ("condominiums") were not even in evidence in 1970, but accounted for 4 percent of year-round housing units in 1980.

Table 14.19 Units in Structure: 1970 and 1980

Units in Structure	Number		Change From 1970 to 1980	Percent	
	1980	1970		1980	1970
Units in Structure	28091	16676	68.5	100.0	100.0
1, detached	16300	11321	44.0	58.0	67.9
1, attached	4493	1072	319.1	16.0	6.4
2	1445	3140	-54.0	5.1	18.8
3 and 4	1205	482	150.0	4.3	2.9
5 or more	4377	611	616.4	15.6	3.7
Boat	13	(NA)	(NA)	.0	0.0
Mobile home or trailer	258	50	416.0	.9	.3

SOURCE: U. S. Bureau of the Census HC80-1-B54, Table 9, and HC(1)-B54, 1970 Table 1.

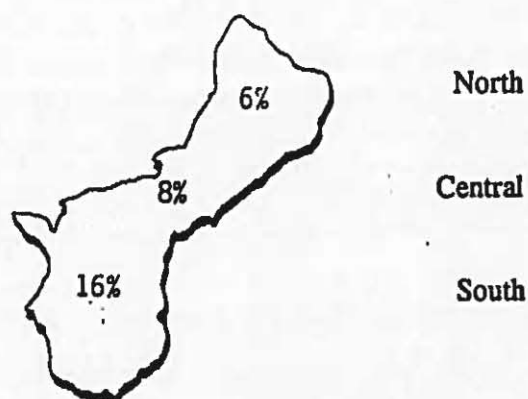
In 1980, 82 percent of year-round housing units were constructed with concrete outside walls; 74 percent had concrete roofs (Table 14.20). Of the remaining units, 9 percent had metal walls, 9 percent had wooden walls, and less than 1 percent had walls constructed of some other material. Metal roofing material was to be found on 21 percent of houses, wood on 2 percent and some other material on the remaining 2 percent of housing units.

Table 14.20 Material of Construction: 1980

Material Used	Number		Percent	
	Walls	Roof	Walls	Roof
Year-round housing units	28091	28091	100.0	100.0
Concrete	22982	20874	81.8	74.3
Metal	2420	5988	8.6	21.3
Wood	2470	553	8.8	2.0
Other	219	676	.8	2.4

SOURCE: U. S. Bureau of the Census HC80-1-B54 1980 Table 9.

Table 14.21 shows housing by wall material by region in 1980. The most common type of wall material was concrete block, followed by poured concrete. For the Northern region, poured concrete was the most common wall material, with concrete block second. Metal, wood and other substances made up only 18 percent overall of materials used for walls, but over 25 percent of walls in the South were made of these materials.



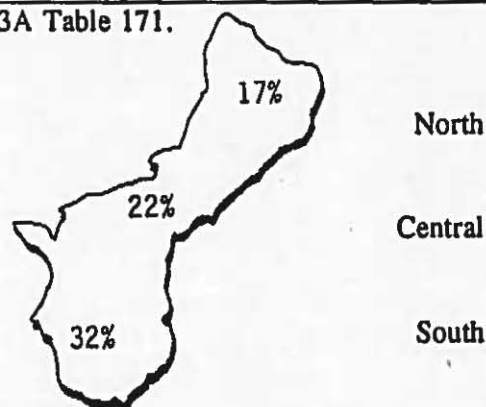
Percent of Units With Metal Walls

Table 14.21 Year-Round Housing by Type of Material Used For Outside Walls: 1980

Material for walls	Number				Percent			
	Total	North	Cntrl	South	Total	North	Cntrl	South
Total Units	28091	13175	9247	5669	100.0	100.0	100.0	100.0
Poured Concrete	9172	6217	1745	1210	32.6	47.2	18.9	21.3
Concrete Block	13810	5151	5640	3019	49.2	39.1	61.0	53.2
Metal	2420	802	722	896	8.6	6.1	7.8	15.8
Wood	2470	938	1045	487	8.8	7.1	11.3	8.6
Other	219	67	95	59	.8	.5	1.0	1.0

SOURCE: U. S. Bureau of the Census Summary Tape File 3A Table 171.

By far, the most common roofing material in all regions was poured concrete (Table 14.22). Those roofs made from materials other than concrete were those most commonly lost in storms. The only region with a significant proportion of roofs made of metal was the South: their percentage was 46 percent higher than that of the next highest region, the Central, while the Central region had the highest percentage of roofs made from other materials.



Percent of Units With Metal Roof

Table 14.22 Year-Round Housing by Type of Material Used For Roof by Region: 1980

Material for roof	Number				Percent			
	Total	North	Cntrl	South	Total	North	Cntrl	South
Total Units	28091	13175	9247	5669	100.0	100.0	100.0	100.0
Poured Concrete	20874	10657	6554	3663	74.3	80.9	70.9	64.6
Metal	5988	2202	1994	1792	21.3	16.7	21.6	31.6
Wood	553	212	252	89	2.0	1.6	2.7	1.6
Other	676	104	447	125	2.4	.8	4.8	2.2

SOURCE: U. S. Bureau of the Census Summary Tape File 3A Table 172.

e) EQUIPMENT CHARACTERISTICS

In 1970, nearly 98 percent of year-round housing units had electric power, about the same as in 1980 (Table 14.23). In both years, roughly 2 percent of year-round units had no electric power. Of those with power in 1980, over 99 percent relied on the public utility; very few had private generators.

Table 14.23 Source of Electric Power: 1970 and 1980

	Number		Percent	
	1980	1970	1980	1970
Year-round units	28091	16676	100.0	100.0
With electric power	27553	16298	98.1	97.7
No electric power	538	378	1.9	2.3

SOURCE: U.S. Bureau of the Census HC(1)-A54 1970 Table 4; HC80-1B54 1980 Table 10.

In 1970, nearly 98 percent of year-round units had cooking facilities for their own use, less than 1 percent shared cooking facilities, and almost 2 percent had no cooking facilities (Table 14.24). In 1980, these proportions had not changed significantly. For occupied housing units, nearly 99 percent had their own cooking facilities, and just over 1 percent either shared cooking facilities or had none. By 1980, over 99 percent had cooking facilities in occupied units. Of these facilities, 98 percent were inside the building in both 1970 and 1980. Electric stoves were used in over 77 percent of occupied housing units, and gas stoves in just over 19 percent. Kerosene stoves and other cooking devices were used in the remaining structures.

Table 14.24 Cooking Facilities: 1970 and 1980

Cooking Facilities	Number		Percent	
	1980	1970	1980	1970
Total year-round units	28091	16676	100.0	100.0
For own use	27587	16326	98.2	97.9
Inside this unit	27000	16035	96.1	96.2
Outside this unit	587	291	2.1	1.7
Also used by another household	...	41	...	.2
No cooking facilities	504	309	1.8	1.9
Occupied housing units	24834	15569	100.0	100.0
For own use	24731	15389	99.6	98.8
Inside this building	24260	15138	97.7	97.2
Outside this building	471	251	1.9	1.6
Also used by another household	...	39	...	.3
No cooking facilities	103	141	.4	.9

Note: Data on shared cooking facilities not collected in 1980.

SOURCE: U. S. Bureau of the Census HC(1)A54 1970 Table 4; HC-1-B54 1980 Table 10.

In 1960, 91 percent of occupied units had mechanical refrigerators and 9 percent had no refrigerator (Table 14.25). In 1970, only 88 percent had mechanical refrigerators, 9 percent had ice boxes, and nearly 3 percent had no refrigerators. By 1980, the percentage with mechanical refrigerators had risen to 98 percent, ice boxes had decreased to just over 1 percent, and another 1 percent of units had no refrigerators. This trend was followed in units that were both owner- and renter-occupied, though renter-occupied units had higher rates of having mechanical refrigerators than did owner-occupied units in all 3 Census years. The lower proportions having mechanical refrigerators in 1970 may be explained by a change in definition.

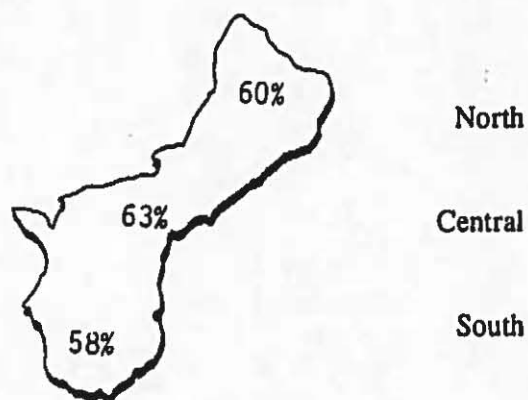
Table 14.25 Refrigerator in Housing Units: 1960 to 1980

Toilet Facilities	Numbers			Percent		
	1980	1970	1960	1980	1970	1960
Occupied units	24834	15569	10830	100.0	100.0	100.0
Mechanical	24241	13720	9852	97.6	88.1	91.0
Ice	321	1450	...	1.3	9.3	...
No refrigerator	272	399	978	1.1	2.6	9.0
Owner-occupied units	11469	7165	5028	100.0	100.0	100.0
Mechanical	11188	6013	4384	97.5	83.9	87.2
Ice	155	890	...	1.4	12.4	...
No refrigerator	126	262	644	1.1	3.7	12.8
Renter-occupied units	13365	8404	5802	100.0	100.0	100.0
Mechanical	13053	7707	5468	97.7	91.7	94.2
Ice	166	560	...	1.2	1.6	5.8

Note: 1960 has data on electric refrigerators only.
No refrigerator includes not reported.

SOURCE: U. S. Bureau of the Census HC80-1-B54 1980 Table 10; HC(1)-A54 1970 Table 4; Census of Housing Part 9 Chapter 54 1960 Table 2.

Of 28,091 year-round housing units identified in 1980, over 59 percent had air conditioners (Table 14.26). Of those with air conditioners, 33 percent had central air conditioning, 32 percent had 1 individual room unit, and 35 percent had 2 or more room units. By region, the Central area had the most air conditioning units, followed by the North. Most of the housing units had 2 or more individual room units in the North and South; those in the Central area had only 1 room unit.



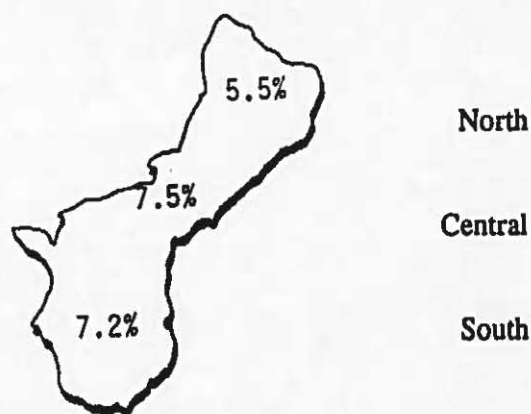
Percent of Units With Air Condition

Table 14.26 Air Conditioning in Unit by Region: 1980

Type	Total	Number			Percent		
		North	Cntrl	South	North	Cntrl	South
Year-round units	28091	13175	9247	5669	100.0	100.0	100.0
None	11301	4852	3833	2616	40.2	36.8	41.5
Central	5567	3455	1308	804	19.8	26.2	14.1
1 ind. room unit	5366	2529	1961	876	19.1	19.2	21.2
2 or more room units	5857	2339	2145	1373	20.9	17.8	23.2

SOURCE: U. S. Bureau of the Census Summary Tape file 3A Table 120.

In 1980, only 7 percent of all occupied housing units had no vehicle available to them (Table 14.27). In 45 percent of the occupied households there was 1 vehicle for use; 2 vehicles were available in 35 percent of households, and 13 percent of homes had 3 or more vehicles that could be used. Those residing in the Southern region had the greatest proportion of single-vehicle available households; the North had the highest percentage of households with 2 vehicles for use, and the Central region had the greatest proportion of homes either 3 or more vehicles available for use.



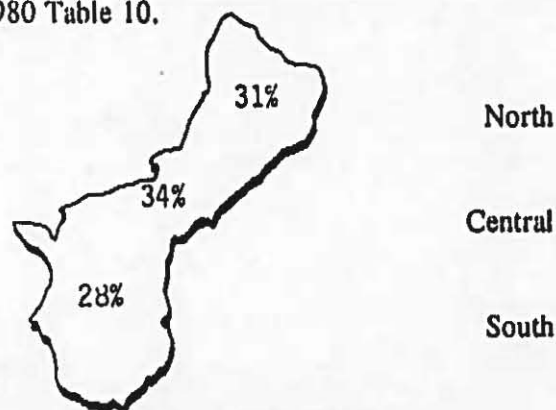
Percent Units Without Vehicles

Table 14.27 Vehicles Available in Household: 1980

Vehicles Available	Total	Number			Total	Percent		
		North	Cntrl	South		North	Cntrl	South
Occupied units	24834	11595	8070	5169	100.0	100.0	100.0	100.0
None	1622	643	605	374	6.5	5.5	7.5	7.2
1 vehicle	11193	5296	3523	2374	45.1	45.7	43.7	45.9
2 vehicles	8716	4165	2764	1787	35.1	35.9	34.3	34.6
3 or more vehicles	3303	1491	1178	634	13.3	12.8	14.6	12.3

SOURCE: U. S. Bureau of the Census HC80-1-B54 1980 Table 10.

In 1980, 31 percent of all occupied housing units had no telephone, 4 percent had no radio, and 7 percent had no television (Table 14.28). The Central region had the highest proportions of having none of these characteristics. From a Civil Defense standpoint, if information had to be disseminated to the public, it would reach the largest audience if it were relayed over the radio.



Percent Units Without Telephone

Table 14.28 Selected Characteristics by Region: 1980

Selected Characteristics	Number				Percent			
	Total	North	Cntrl	South	Total	North	Cntrl	South
Occupied units	24834	11595	8070	5169	100.0	100.0	100.0	100.0
No telephone	7793	3638	2735	1420	31.4	31.4	33.9	27.5
No radio	1023	443	358	222	4.1	3.8	4.4	4.3
No television	1751	736	624	391	7.1	6.3	7.7	7.6

SOURCE: U. S. Bureau of the Census HC80-1-B54 1980 Table 10.

There were telephones in nearly 69 percent of occupied units in 1980 (through they did not necessarily work) (Table 14.29). When reviewed by the age of householder, the age group with the highest percentage of phones were those who were 60 to 64 years of age, followed by those under 60. The elderly (65 and older) had the lowest rate of units with telephones.

Table 14.29 Telephone in Unit by Age of Householder: 1980

Telephone in unit	Total	Age of Householder		
		Under 60 years	60 to 64 years	65 years and over
Total occupied units	24834	22419	1035	1380
With telephone	17041	15415	742	884
Percent with phone	68.6	68.8	71.7	64.1

SOURCE: U. S. Bureau of the Census Summary Tape File 3A 1980 Table 119.

Owner-occupied units had higher percentages of telephones in their units than did all renter-occupied units (78 percent to 60 percent), but those units that were occupied with no cash rent had the highest rates of all: 84 percent of those units had phones (Table 14.30). This was true for each region as well as the island as a whole.

Table 14.30 Telephone in Unit by Tenure and Region: 1980

Telephone in Unit	Number				Percent			
	Total	North	Cntrl	South	Total	North	Cntrl	South
Total occupied units	24834	11595	8070	5169	100.0	100.0	100.0	100.0
With telephone	17041	7957	5335	3749	68.6	68.6	66.1	72.5
Renter occupied units	13365	6651	4089	2625	...	...	...	...
with cash rent	7661	4121	2625	915	100.0	100.0	100.0	100.0
With telephone	3268	1679	1162	427	42.7	40.7	44.3	46.7
no cash rent	5704	2530	1464	1710	100.0	100.0	100.0	100.0
With telephone	4787	2228	1083	1473	83.9	88.1	74.0	86.1
Owner occupied units	11469	4944	3981	2544	100.0	100.0	100.0	100.0
With telephone	8989	4050	3090	1849	78.4	81.9	77.6	72.7

SOURCE: U. S. Bureau of the Census Summary Tape file 3A 1980 Table 118.

f) FINANCIAL CHARACTERISTICS

The value of a housing unit was the respondent's estimate of how much the property (house and lot) or condominium unit would sell for, if it were for sale. For vacant units, value was the price asked for the property.

Table 14.31 shows the value of housing units by region. The responses reflect subjective rather than totally objective views of the value of the unit. Those residing in the south and Central regions stated most frequently that their homes were worth between \$60,000 and \$79,999, and those in the North felt their units were worth between \$50,000 and \$59,999. the median amounts of value listed ranged from \$55,200 in the North to \$66,400 in the Central area.

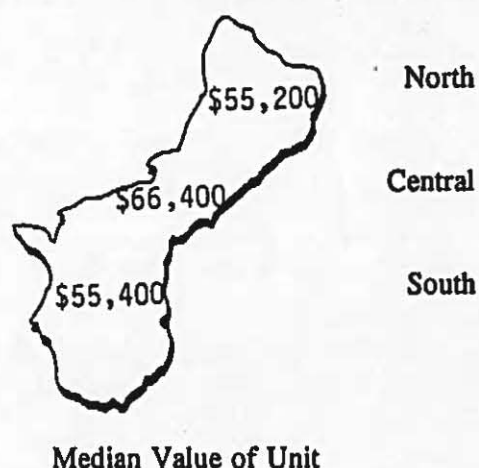


Table 14.31 Value of Housing Units by Region: 1980

Value	Number				Percent			
	Total	North	Cntrl	South	Total	North	Cntrl	South
Specified owner-occupied units	10489	4412	3706	2371	100.0	100.0	100.0	100.0
Less than \$10,000	385	166	89	140	3.8	3.8	2.4	5.9
\$10,000 - 14,999	298	102	82	114	2.8	2.3	2.2	4.8
\$15,000 - 19,999	274	88	90	96	2.6	2.0	2.4	4.0
\$20,000 - 24,999	332	88	119	125	3.2	2.0	3.2	5.3
\$25,000 - 29,999	393	197	104	92	3.7	4.5	2.8	3.9
\$30,000 - 34,999	440	202	139	99	4.2	4.6	3.8	4.2
\$35,000 - 39,999	397	183	117	97	3.8	4.1	3.2	4.1
\$40,000 - 49,999	1272	665	363	244	12.1	15.1	9.8	10.3
\$50,000 - 59,999	1770	994	443	333	16.9	22.5	12.0	14.0
\$60,000 - 79,999	2660	1091	959	610	25.4	24.7	25.9	25.7
\$80,000 - 99,999	1022	292	551	179	9.7	6.6	14.9	7.5
\$100,000-149,999	745	178	428	139	7.1	4.0	11.5	5.9
\$150,000-199,999	240	67	119	54	2.3	1.5	3.2	2.3
\$200,000 or more	251	99	103	49	2.4	2.2	2.8	2.1
Median	\$57600	55200	66400	55400	...	...	...	...

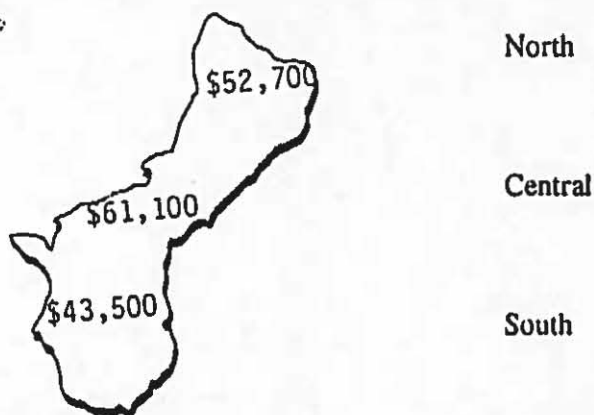
SOURCE: U. S. Bureau of the Census HC80-1-A54 1980 Table 4.

The price asked for vacant for-sale housing units was similar for all 3 regions on island in 1980: between \$60,000 to \$79,999 per unit, though those in the North were slightly lower at \$50,000 to \$59,999 table 14.32). The median prices asked per region were slightly lower than the median values per region, except for the North, where the median price was nearly 5 percent higher than the median value given for housing units. The other regions had median prices asked that ranged from 9 percent lower in the Central area to 27 percent lower in the South.

Table 14.32 Price Asked for Vacant For Sale Units by Region: 1980

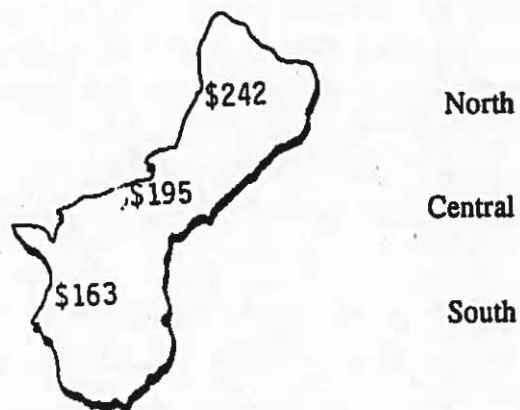
Value	Number				Percent			
	Total	North	Cntrl	South	Total	North	Cntrl	South
Specified vacant for sale units	193	96	71	26	100.0	100.0	100.0	
Less than \$10,000	18	9	6	3	9.3	9.4	8.5	11.5
\$10,000 - 14,999	6	4	1	1	3.1	4.2	1.4	3.8
\$15,000 - 19,999	5	3	2	0	2.6	3.1	2.8	0.0
\$20,000 - 24,999	6	2	2	2	3.1	2.1	2.8	7.7
\$25,000 - 29,999	9	4	3	2	4.7	4.2	4.2	7.7
\$30,000 - 34,999	11	9	1	1	5.7	9.4	1.4	3.8
\$35,000 - 39,999	11	6	2	3	5.7	6.2	2.8	11.5
\$40,000 - 49,999	18	5	10	3	9.3	5.2	14.1	11.5
\$50,000 - 59,999	30	22	8	0	15.5	22.9	11.3	0.0
\$60,000 - 79,999	41	16	18	7	21.2	16.7	25.4	26.9
\$80,000 - 99,999	17	6	10	1	8.8	6.2	14.1	3.8
\$100,000-149,999	16	9	5	2	8.3	9.4	7.0	7.7
\$150,000-199,999	2	0	1	1	1.0	0.0	1.4	3.8
\$200,000 or more	3	1	2	0	1.6	1.0	2.8	0.0
Median	\$55,400	\$52,700	\$61,100	\$43,500	...	...	...	...

SOURCE: U. S. Bureau of the Census HC80-1-A54 1980 Table 4.



Price Asked for Vacant for Sale

The most frequent amounts asked for rent for vacant for-rent units was between \$200 to 249 (Table 14.33). By region, this varied only slightly, with the Central and Southern areas asking \$170 to \$199 and \$150 to \$169, respectively. The median rent asked for the island's vacant units was \$205. The Northern area median was 18 percent higher at \$242; the South 20 percent lower at \$163. The North, however, had nearly 4 times as many vacant for-rent units than did the South.



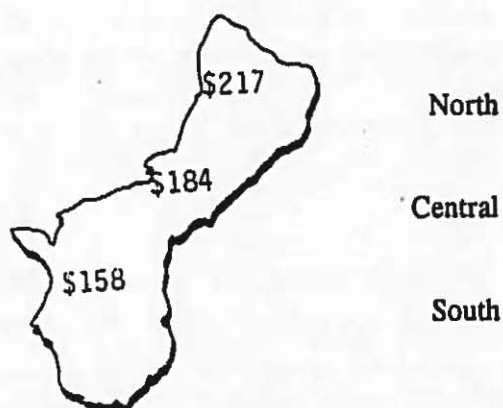
Rent Asked for Vacant for Rent Unit

Table 14.33 Rent Asked for Vacant for Rent Housing Units: 1980

Value	Number				Percent			
	Total	North	Cntrl	South	Total	North	Cntrl	South
Vacant for rent Housing units	1347	676	525	146	100.0	100.0	100.0	100.0
Less than \$50	34	16	10	8	2.5	2.4	1.9	5.5
\$50 - 59	23	12	7	4	1.7	1.8	1.3	2.7
\$60 - 79	27	12	9	6	2.0	1.8	1.7	4.1
\$80 - 99	35	27	6	2	2.6	4.0	1.1	1.4
\$100 - 119	74	33	24	17	5.5	4.9	4.6	11.6
\$120 - 149	81	25	41	15	6.0	3.7	7.8	10.3
\$150 - 169	174	65	77	32	12.9	9.6	14.7	21.9
\$170 - 199	193	80	108	5	14.3	11.8	20.6	3.4
\$200 - 249	226	121	82	23	16.8	17.9	15.6	15.8
\$250 - 299	171	92	61	18	12.7	13.6	11.6	12.3
\$300 - 349	140	78	51	11	10.4	11.5	9.7	7.5
\$350 - 399	74	48	22	4	5.5	7.1	4.2	2.7
\$400 - 499	44	28	15	1	3.3	4.1	2.9	.7
\$500 or more	51	39	12	0	3.8	5.8	2.3	0.0
Median	\$205	242	195	163	...	...	...	...

SOURCE: U.S. Bureau of the Census HC80-1-A54 1980 Table 4.

Contract rent was the monthly rent agreed to, or contracted for, regardless of any furnishings, utilities or services that may have been included (Table 14.34). The majority of all renter-occupied units paid no cash rent in 1980. of those that did, the most frequent category of contract rent paid was that of \$200 to \$249, followed by \$250 to \$299. This was slightly higher in the Central region, where the most common amount paid was between \$250 to \$299, and lower in the South, where amounts between \$150 to \$169 were most often paid.



Contract Rent of Unit

Table 14.34 Contract Rent of Housing Units by Region: 1980

Contract Rent	Number				Percent			
	Total	North	Cntrl	South	Total	North	Cntrl	South
Renter-occupied Housing units	13365	6651	4089	2625	100.0	100.0	100.0	100.0
No cash rent	5704	2530	1464	1710	42.7	38.0	35.8	65.1
Less than \$50	386	154	156	76	2.9	2.3	3.8	2.9
\$50 - 59	185	73	71	41	1.4	1.1	1.7	1.6
\$60 - 79	305	79	152	74	2.3	1.2	3.7	2.8
\$80 - 99	167	71	61	35	1.2	1.1	1.5	1.3
\$100 - 119	501	224	183	94	3.7	3.4	4.5	3.6
\$120 - 149	548	272	175	101	4.1	4.1	4.3	3.8
\$150 - 169	927	442	351	134	6.9	6.6	8.6	5.1
\$170 - 199	919	516	350	53	6.9	7.8	8.6	2.0
\$200 - 249	1132	687	344	101	8.5	10.3	8.4	3.8
\$250 - 299	1102	646	366	90	8.2	9.7	9.0	3.4
\$300 - 349	676	430	181	65	5.1	6.5	4.4	2.5
\$350 - 399	351	214	107	30	2.6	3.2	2.6	1.1
\$400 - 499	280	187	77	16	2.1	2.8	1.9	.6
\$500 or more	182	126	51	5	1.4	1.9	1.2	.2
Median	\$193	217	184	155	...	...	...	...

SOURCE: U.S. Bureau of the Census HC80-1-A54 1980 Table 4.

Gross rent differs from contract rent by the addition of the estimated average monthly cost of utilities and fuels, if these were paid for by the renter in addition to rent (Table 14.35). Overall, for those who paid cash rent, the gross amount was most commonly in the range of \$200 to \$249 per month, followed by \$400 or more. Only the Southern region varied from this pattern: their most frequent rent category was that of \$00 or more, followed by \$200 to \$249. The South also had the highest frequency of those paying no cash rent, at 69 percent of renter-occupied units.

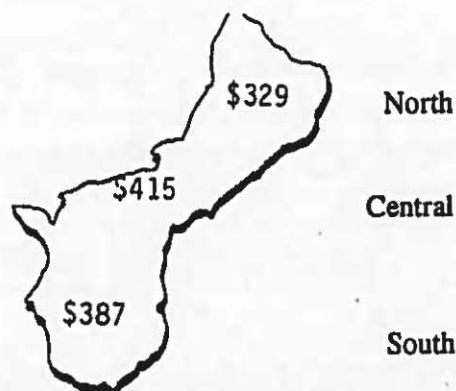
Table 14.35 Gross Rent by Region: 1980

Gross Rent	Number				Percent			
	Total	North	Cntrl	South	Total	North	Cntrl	South
Renter-occupied Housing units	13365	6651	4089	2625	100.0	100.0	100.0	100.0
Less than \$50	58	41	13	4	.4	.6	.3	.2
\$50 - 59	52	33	12	7	.4	.5	.3	.3
\$60 - 79	108	54	39	15	.8	.8	1.0	.6
\$80 - 99	179	58	77	44	1.3	.9	1.9	1.7
\$100 - 124	345	134	145	66	2.6	2.0	3.5	2.5
\$125 - 149	406	172	161	73	3.0	2.6	3.9	2.8
\$150 - 174	525	206	205	114	3.9	3.1	5.0	4.3
\$175 - 199	651	305	244	102	4.9	4.6	6.0	3.9
\$200 - 249	1489	801	539	149	11.1	12.0	13.2	5.7
\$250 - 299	1039	614	316	109	7.8	9.2	7.7	4.2
\$300 - 399	1670	1037	515	118	12.5	15.6	12.6	4.5
\$400 or more	1139	666	359	114	8.5	10.0	8.8	4.3
No cash rent	5704	2530	1464	1710	42.7	38.0	35.8	65.1
Median	\$251	271	239	211	...	...	...	...

SOURCE: U.S. Bureau of the Census Summary Tape File 3A, 1980 Table 124.

Units with mortgages made up the majority of all owner-occupied housing units, ranging from a high of 82 percent in the Central region, to a low of 65 percent in the South (Table 14.36). For mortgaged units, the monthly owner costs were usually \$00 or more a month, for all regions. The second most common amount of monthly owner costs varied by region, with the South area having the highest (\$350 to \$399) and the North the lowest (\$250 to \$299).

Monthly Owner Costs for Units with Mortgages



For unmortgaged units, monthly costs were much lower: from \$50 to \$74 per month in the South to \$75 to \$99 in both the North and Central regions. The inclusion of a mortgage significantly affected the amount of costs paid by owners every month.

Table 14.36 Mortgage Status and Selected Monthly Owner Costs: 1980

Monthly Owner Costs	Number				Percent			
	Total	North	Cntrl	South	Total	North	Cntrl	South
Owner-occupied								
Housing units	10489	4412	3706	2371	...	...	...	...
With mortgage	6802	3104	2368	1330	100.0	100.0	100.0	100.0
Less than \$50	8	3	4	1	.1	.1	.2	.1
\$50 - 59	2	0	1	1	.0	0.0	.0	.1
\$60 - 79	16	7	5	4	.2	.2	.2	.3
\$80 - 99	33	11	15	7	.5	.4	.6	.5
\$100 - 149	102	39	43	20	1.5	1.3	1.8	1.5
\$150 - 199	329	182	96	51	4.8	5.9	4.1	3.8
\$200 - 249	755	484	172	99	11.1	15.6	7.3	7.4
\$250 - 299	928	530	255	143	13.6	17.1	10.8	10.8
\$300 - 349	983	497	261	195	14.0	16.0	11.0	14.7
\$350 - 399	846	384	267	195	12.4	12.4	11.3	14.7
\$400 or more	2830	967	1249	614	41.6	31.2	52.7	46.2
Median	\$366	239	415	387	...	...	...	...
No mortgage	3687	1308	1338	1041	100.0	100.0	100.0	100.0
Less than \$30	157	48	47	62	4.3	3.7	3.5	6.0
\$30 - 49	419	131	132	156	11.4	10.0	9.9	15.0
\$50 - 74	797	278	274	245	21.6	21.3	20.5	23.5
\$75 - 99	799	306	276	217	21.7	23.4	20.6	20.8
\$100 - 124	587	232	212	143	15.9	17.7	15.8	13.7
\$125 - 149	357	130	140	87	9.7	9.9	10.5	8.4
\$150 or more	571	183	257	131	15.5	14.0	19.2	12.6
Median	\$90	91	94	82				

SOURCE: U.S. Bureau of the Census Summary Tape File 3A, Table 133.

g) SUMMARY

The final table (Table 14.37) in this chapter shows a summary of pertinent housing data from 1960 to 1980. The most appropriate term to use for the changes occurring on Guam for the last 20 years is "growth", growth in all aspects of housing, from the number of units available to the addition of amenities in those units. a significant shift to the Northern region is also apparent. with more units being located there, the impact on the infrastructure of the region is becoming more obvious, as is the need for its improvement. Water, power, sewage and telephone services are probably being strained to their limits, and may continue to be as more housing complexes and hotels are added.

Table 14.37 Summary of Housing Characteristics: 1960 to 1980

Characteristics	(1990)	1980	1970	1960
Total persons	133152	105979	84996	67044
Total housing units	35223	28249	16680	12373
Year-round housing units:				
Total	35223	28091	16676	12373
Median rooms	5.0	4.7	4.6	4.7
Percent:				
One unit in structure	73.3	74.0	74.3	91.6
5 or more units in structure	17.6	15.6	3.7	...
Lacking complete plumbing in building		4.2	18.9	...
Structure 10 yrs old or less		58.7	52.0	...
Structure built before 1940		.3	1.3	...
Source of water public system	99.2	99.6	97.7	...
Electric power		98.1	97.7	...
Occupied		24834	15569	10830
Owner occupied		11469	7165	5028
Median rooms		4.8	4.6	4.6
Median number of persons		3.7	...	4.5
Percent:				
1.01 or more persons per room	24.7	24.4	38.2	38.4
1 unit in structure		75.9	74.8	92.5
Specified owner:				
Median value (\$)	130500	57600	13500	4200
Renter occupied:				
Median contract rent (\$)	483	193	114	76
Median gross rent (\$)	547	251	...	80
Vacancy rate:				
Homeowner		2.3	1.4	...
Rental		9.2	4.8	...

SOURCE: U. S. Bureau of the Census HC80-1-A54 1980 Table 1; Summary Tape File 3A 1980 Table 120; HC80-1-B54 1980 Tables 9, 10, 11; HC(1)-A54 1970 Tables 1, 2, 3, 4, 5; Census of Housing 1960 Tables 1, 4 and 5.

The cost of obtaining and maintaining housing has also risen in the last 2 decades. As demand grows and space considerations limit the number of units available, the costs will probably continue to rise. Though the vacancy rates shown in Table 14.38 are lower for 1980 than 1970, it should be remembered that 1980 was a period of lower military activity than 1970, so there were fewer military families looking for off-base housing. This situation is expected to change by 1990, since there were several military ships homeported on Guam in the meantime.

As data from the 1990 Census of Housing become available, it will be crucial to compare them to data from previous censuses to chart the changes in growth and distribution of housing on Guam, and assess the further impact on the Guam's utilities.

h) Table 2B
CHAS Table 2B

U.S. Department of Housing and Urban Development
Office of Community Planning and Development

MARKET AND INVENTORY CONDITIONS
HOUSING STOCK INVENTORY

Comprehensive Housing Affordability Strategy (CHAS)

Name of Jurisdiction(s) or Consortium:			Five Year Period: (enter fiscal years)	
			FY:	through FY:
			Check one: ☒ 1980 Census ☐ Current Estimates as of: (enter date)	
Category	Total (A)	0 or 1 Bedrooms (B)	2 bedrooms (C)	3 or more bedrooms (D)
Total year-Round Housing	28,091	3,397	9,673	14,021
Total Occupied Units	24,834	2,648	8,359	13,827
Renter Occupied Units	13,365	8,148	1,029	4,058
Standard	N/A	N/A	N/A	N/A
Substandard	N/A	N/A	N/A	N/A
Suitable for Rehab	N/A	N/A	N/A	N/A
Owner Occupied Units	11,469**	10,696	273	404
Standard	N/A	N/A	N/A	N/A
Substandard	N/A	N/A	N/A	N/A
Suitable for Rehab	N/A	N/A	N/A	N/A
Total Vacant Units	3,257	N/A	N/A	N/A
For Rent	1,347	N/A	N/A	N/A
Standard	N/A	N/A	N/A	N/A
Substandard	N/A	N/A	N/A	N/A
Suitable for Rehab	N/A	N/A	N/A	N/A
For Sale	276	N/A	N/A	N/A
Standard	N/A	N/A	N/A	N/A
Substandard	N/A	N/A	N/A	N/A
Suitable for Rehab	N/A	N/A	N/A	N/A
Awaiting Occupancy or Held	404	N/A	N/A	N/A
Other	N/A	N/A	N/A	N/A

N/A = Data not available
 * = There are 3 boats, 127 mobile homes/trailer units
 ** = There are 10 boats, 86 mobile homes/trailer units

form HUD-40090 (5/16/91)

SECTION II
FIVE YEAR STRATEGY

SECTION III FIVE YEAR STRATEGY

Part 3 STRATEGY

The strategy presented under this component are linked to the needs and objectives described under Part 1(a)(b) and as documented under Part 1 items 2, 3(a) to (l) and Part 2 items 1, 2(a) to (j).

Guam's Five (5) Year Strategy describes the territory's overall efforts to address the island community's needs for housing especially low income and moderate income housing, rental assistance, housing and rental assistance for the elderly, handicapped, homeless and special needs populations. The plan and strategy specifies how GHURA with the respective official agencies and non-profits will seek the use of federal HUD and McKinney Act grant funds, local/Gov Guam funds, private sector donations and other funds to accommodate and/or improve the availability of housing, rental assistance, support services to respond to the needs of special populations, the low income and other individuals and/or groups singled out by the National Affordable Housing Act and other HUD related programs and legislation.

The priorities which will be sought over the five (5) year period are as follows: These priorities are not ranked according to importance or rating in terms of need. However, if we were to rank them, the priority would be as numerically listed.

1. To encourage, promote, and/or seek to expand the supply of "affordable housing units and rental units and public housing supply for low income families. To preserve GHURA's limited housing inventory wherever possible unless replacements can be provided once homeowner initiatives are made to individual tenants. To identify, locate, and secure "developers" and/or "contractors" lenders who are willing and able to develop lower cost housing alternatives for low income families.
2. To promote and/or assist in the coordination and/or development of housing partnerships between federal and territorial agencies, private non-profit entities and corporations, banking and lending institutions and developers to pool housing resources, create and/or build affordable housing projects and/or facilitate opportunities for low income and moderate income families to obtain land, housing and/or make available lease/purchase arrangements and/or low interest loans for homes. To encourage developers, contractors, and/or the government to build, facilitate the financing and/or construction of multi-family units, congregate housing and rental units for low income and middle income families.
3. To assist non-profit entities and/or resident councils and groups, and government agencies in developing their skills for planning and/or applying for available federal grants and/or developing support services for low income families, handicapped individuals, homeless citizens and families aimed at improving or developing such individuals and families so that they can increase their potential and marketability for employment and ability to become homeowners or secure shelter. To help increase the opportunities for low income families to become entrepreneurs and/or service providers in day care, home care assistance, home cleaning, lawn cleaning, catering, landscaping, tourist and/or related activities or services. To help provide job training opportunities for low income residents and allow them to increase their equity stakes in homes and neighborhoods. To increase the supply of supportive housing/shelter and services so that persons with special needs, including the elderly can live with dignity and independence in decent, safe, and sanitary housing. To assist non-profit organizations, resident councils, units of governments, and/or groups of citizens with special needs in obtaining temporary and/or

permanent housing for clients and/or individuals they serve and insure appropriate support services are combined with such endeavors by providing technical, planning and implementation assistance. To assist the above groups in applying for federal and local funding assistance. To develop and provide programs to help stabilize and preserve public housing projects by assisting residents in such neighborhoods to be a viable part of the island community and are "neighborhoods" which are decent, safe, sanitary, crime and drug free and wholesome environments for raising families. To provide and encourage appropriate recreational, social, educational, health, supportive and related leisure time activities in public housing areas which would enhance public housing residents' well being as neighborhoods.

4. To increase the availability of acceptable culturally sensitive, energy conscious, and lower cost housing and rental unit supply in the villages by encouraging the rehabilitation, repair, and or upgrading of tin-roofing homes with concrete and/or wooden structures or substandard concrete homes. To preserve the supply of such homes and "public housing" structures within the Territory for low income families.
5. To promote policies and/or advocate for an increase in the housing subsidy provided families for rental.
6. To promote the building of energy conscious and efficient housing and energy efficient appliances and equipment in housing development projects affecting low income families. To advocate the use and/or establishment of "lifeline" rates for low income families for water, power, and gas. To promote such things as the building of water catchment and solar heat systems and typhoon proof modular, or foam paneled houses, or new low cost material technology.
7. To promote and/or encourage local/federal support for infrastructure developments in areas designated for the landless and low income families.
8. To promote the long-term rental of government land for the low income rather than the sale of government land so as to conserve our limited supply for future generations.
9. To promote and/or assist the community in becoming more aware about housing problems, innovative concepts and/or strategies directed at increasing housing developments within the territory and in understanding the housing crisis or situation on Guam affecting low, moderate and middle income families.
10. To repair and/or modernize certain housing units in GHURA's low cost housing areas and projects through the use of still available prior year CIAP FY91 and 92 funds. Future Comprehensive Assistance Grant monies will be used for physical improvements and management initiatives geared at steadily upgrading our handling of our public housing projects.
11. To promote and/or encourage the formal review and/or analysis of regulation, zoning laws, development policies, tax laws and or environmental policies and/or laws which increase the cost of housing, and/or serve as barriers to affordable housing. To reduce red tape, delays, and/or unnecessary clearance and costs associated with the home building and home rental; permitting, inspection and licensing process. To promote the removal of unnecessary barriers wherever possible with respect to home building and housing rental processing.

Guam's housing situation is more like Hawaii's than the continental U.S. as a whole. Prices for homes

are inordinately high compared to nationwide norms as well as rental. We do not have a lot of older apartment or condo developments where we could repair and/or modernize to add to our housing stock. The vacancy rate for rental is very low. Hence, our greater need should be directed at producing more housing and rental units via new construction and seeking of increased subsidy for rental. The existing situation also prevents GHURA from very actively promoting a reduction of its housing supply through the sale of such units unless we can readily replace our housing supply.

COMMUNITY HOUSING AND INSTITUTIONAL STRUCTURE
BY TYPE OF ACTIVITY/ROLE ASSUMED IN SERVICE PROVIDED

Table 21.9

Department/Agency Organization	Development Production Acquisition of Housing	Property Management	Support Services	Financing Loan/Grant Programs	Homeless Ass/Aid Housing	Good Financing Other Alter- natives/Rev. Funds	Federal/Local Appropriations for Program/ Operations	Tax Credits	Mortgage Down Payment Ass. & Other Ass. Payments	Private Grants/ Donations	Rehab Grants Modernization Relocation Payments	Land Grants/ Assistance	Low Income Housing- Rental Only	Moderate Income/Loans and Grants
1. GHURA	X	X	X		X			X	X		X	X	X	
2. GHC	X	X		X					X					X
3. GEDA						X		X						
4. Lending Institutions				X					X					X
5. Private Developers	X													
6. Sanctuary	(X)		X		X					X				
7. Catholic Social Services	(X)		X		X				emergency to prevent eviction	X				
8. Mental Health & Sub. Abuse			X											
9. Dept. of Youth Affairs			X											
10. MARP			X											
11. Guma' San Francisco			X				X			X				
12. WPAD			X											
13. Dept. of Parks & Recreation			X											
14. Agency for Human Services Dev.			X											
15. Commission on Persons with Disabilities			X											
16. Advocacy Office			X											
17.														
18.														
19.														
20.														
21.														

PART 3

STRATEGY

PRIORITIES FOR ASSISTANCE
5-YEAR PLAN

Comprehensive Housing Affordability Strategy (CHAS)

Name of Jurisdiction(s) or Consortium: Territory of Guam						Mark One: / / Current Estimate as of: (enter date)				
						/ / Five Year Period: (enter fiscal yrs.) FY: 1991 through FY: 1996				
Activity	Renters				Owners			Homeless Persons (H)	Other Persons with Special Needs (I)	
	Elderly Households (A)	Non-elderly Households			Existing Homeowners (E)	First-Time Homebuyers				
		Small Family (2 to 4) (B)	Large Family (5 or more) (C)	All Others Households (D)		Families w/ Children (F)	All Others (G)			
Very Low-Income Persons	1. Moderate Rehab/Acquisition									
	2. New Construction Substantial Rehab, Related Infrastructure									
	3. Rental Assistance									
	4. Homebuyers Assistance									
	5. Support Facilities and Services									
Other Low-Income Persons	6. Moderate Rehab/Acquisition									
	7. New Construction Substantial Rehab, Related Infrastructure									
	8. Rental Assistance									
	9. Homebuyers Assistance									
	10. Support Facilities and Services									

SECTION III
ONE YEAR PLAN

SECTION III - One Year (1st Year) Plan

Part IV - Resources and Plan

Our one year and/or 1st year plan are as follows:

1. To apply for Emergency Shelter Grant funds (\$60,000) for FY92 and to use the \$18,000 FY91 funds secured from HUD from unallocated funding sources to provide funding support for the temporary emergency shelters managed by Guma San Francisco and/or Catholic Social Services.
2. To apply for \$1.1M of available FY92 funding under the Comp Grant to modernize, repair and/or improve some of the low cost Public Housing Units found throughout the is land so that they can meet acceptable housing standards and are in a condition which would facilitate its continual rental and insure the rental of public
3. To assist non profit entities Catholic Social Services and St. Vincent De Paul in applying for FY92 and/or 93 Transition Housing grant funds under the Supportive Housing Demonstration Program for assisting homeless individuals and families with shelter and support services.
4. To apply for CDBG FY91 funds (\$4.8M), FY92 (\$4.4M), and \$2.5M for FY93 each subsequent year and thereafter depending on our authorized grant level. The above FY91 and 92 funds will be used to complete the Asan Redevelopment project by allowing the use.

PART 4

RESOURCES AND PLAN

Goals for Families
to be Assisted with Housing

Comprehensive Housing Affordability Strategy (CHAS)

FY:

Assistance Provided by Income Group	Total Section 215 Goals (A)	Total Goals (B)	Renters				Total Renters (G)	Existing Homeowners (H)	First-Time Homebuyers		Total Homeowners (K)
			Elderly Households (C)	Non-elderly Households					Families with Children (I)	All Others (J)	
				Small Family (2 to 4) (D)	Large Family (5 or more) (E)	All Others Households (F)					
1. Very Low-Income (0 to 50% of MFI)											
2. Mod Rehab & Acquisition											
3. New Const, Sub Rehab, Related Infrastructure											
4. Rental Assistance											
5. Homebuyer Assistance											
6. Support Services											
7. Other Low-Income (51% to 80% of MFI)											
8. Mod Rehab & Acquisition											
9. New Const, Sub Rehab, Related Infrastructure											
10. Rental Assistance											
11. Homebuyers Assistance											
12. Support Services											
13. Total Low-Income (Lines 1 and 7)											
14. Other Income (More than 80% of MFI)											
15. Grand Total (Lines 13 and 14)											

b) Table 4/5A
CHAS Table 4/5A

U.S. Department of Housing and Urban Development
Office of Community Planning and Development

Anticipated Resources & Plan for Investment

Comprehensive Housing Affordability Strategy (CHAS)

FY: _____

Funding Source Federal Funds Awarded or to be Awarded to Jurisdiction	Anticipate to be Available (A)	Expect to Commit (B)	Anticipated resources expected to be committed to projects/activities during FY (\$000's)							
			Rehabilitation (C)	Acquisition (D)	Tenant Assistance (E)	New Construction (F)	Home Buyer Assistance (G)	Planning Grants (H)	Support Services (I)	Operating Costs (J)
1. Home										
2. Hope I										
3. Hope II										
4. Hope III										
5. CDBG										
6. DOE/Other Energy Prg.										
7. Other (Specify)										
8.										
9. Subtotal - Housing										
10. CDBG (Homeless)										
11. ESG										
12. Perm. Housing for Handicapped										
13. Transitional Housing										
14. Shelter Plus Care										
15. Other (Specify)										
16.										
17.										
18. Subtotal-Homeless										
19. Total to Jurisdiction										

Funding Source Federal Funds Awarded or to be Awarded to Jurisdiction	Anticipate to be Available (A)	Expect to Commit (B)	Anticipated resources expected to be committed to projects/activities during FY (S000's)							
			Rehabilitation (C)	Acquisition (D)	Tenant Assistance (E)	New Construction (F)	Home Buyer Assistance (G)	Planning Grants (H)	Support Services (I)	Operating Costs (J)
20. Hope I										
21. Hope II										
22. Hope III										
23. Section 202 Elderly										
24. Section 811 Handicapped										
25. Rental Certification										
26. Rental Vouchers										
27. Mod Rehab SROs Proj.										
28. Perm Housing for Handicapped										
29. Transitional Housing										
30. LIHTC										
31. Public Housing MROP										
32. Public Housing Development										
33. Public Housing CIAP										
34. Public Housing Comprehensive Grant Program										
35. FmHA										
36. Other (Specify)										
37.										
38.										
39. Total - Other Entities										
40. Total - Federal										

Funding Source Federal Funds Awarded or to be Awarded to Jurisdiction	Anticipate to be Available (A)	Expect to Commit (B)	Anticipated resources expected to be committed to projects/activities during FY (\$000's)							
			Rehabilitation (C)	Acquisition (D)	Tenant Assistance (E)	New Construction (F)	Home Buyer Assistance (G)	Planning Grants (H)	Support Services (I)	Operating Costs (J)
State Funds (Specify)										
41.										
42.										
43.										
44.										
45. Subtotal - State Funds										
Local Funds (Specify)										
46.										
47.										
48.										
49.										
50. Subtotal - Local Funds										
Private Funds (Specify)										
51.										
52.										
53.										
54.										
55. Subtotal - Private Funds										
56. Total - Non-Federal Funds										
57. Grand Total All Funds										

FEDERAL AND LOCAL PROGRAMS WHICH WILL BE SOUGHT
TO PROVIDE FUNDING FOR STRATEGIES AFFECTING
THESE HUMAN SERVICES ORGANIZATIONS/GHURA/FAMILIES
BY FISCAL YEAR AND ESTIMATED GRANT LEVEL SOUGHT

Table 21.10

Program Name	HOME	Planning & Imp. Grants Hope 1, 2 & 3	CDBG	Comp Grant/CIAP	ESGP	Permanent Housing for Handicapped	Tran Housing Shelter Plus	FMHA	Sec 202 Elderly	Sec 811 Handicapped	Rental Vouchers Rental Cert.	Mod Rehab SRO's	CAHAT/Gov Guam Program
1. Division of Senior Citizens Dept. of PH&SS									FY96 \$1.3M				FY92 to 96 Operations Monies
2. Guma' Mami						FY95				FY95 \$1.5M			Operations Monies 500,000
3. Division of Sp. Ed. Dept. of Ed.													FY92 to 96 Operations Monies
4. Guma' San Francisco					FY92to96 \$60,000		FY93 \$250,000						
5. Alee (Catholic Social Services)							FY94/96 \$200,000						
6. Sanctuary							FY95 \$400,000						FY92 to 96 Operations
7. Dept. of Youth Affairs													FY92 to 96 Operations
8. Guma' Man Hoben DAHSA													Annually FY92 to 96
9. Resident Council(s)		FY94 \$100/200,000											
10. Public Housing Tenants				FY92 to 96 \$1.1M									
11. Low Income Families	**		FY93 to 96 \$2.0M					FY93 or 94 \$6.0M					
12. Area Redevelopment Project Resident			FY91/92 \$4.2/\$4.5M										
13. Mod. Income Families													
14. Homeless Program Catholic Social Services							FY94/96 \$400,000						
15. Homeless													
16. Other													
17. Elderly													

*Guam's estimated grant base

PART 5

IMPLEMENTATION

Part 5 IMPLEMENTATION

October 1, 1991 to September 30, 1992

This section describes our implementation plan for a one year period, namely October 1991 to September 1992:

Basically these will be as follows:

1. Assist the following organization in documenting in specific terms their housing needs, giving them technical assistance on how to write up their application for grants and/or funds they could pursue to assist them with their shelter/housing/support services needs:
 - a) Sanctuary - serving homeless, runaway and abused youths
 - b) Organizations serving the handicapped
 - c) Organizations serving the homeless
 - d) Guma Mami - mentally retarded
 - e) Organizations serving the mentally ill, drug abuse, aids and related clients
 - f) Organizations serving the elderly
2. Secure Emergency Shelter Grant Funds and monitor use of such funds for one of the organizations serving the homeless population.
3. Review the Self Sufficiency Program
4. Implement the Youth Sport Program for the Toto Gardens project if we get a grant and funds are received.
5. Follow through on CDBG funds requested which are to be used to complete the Asan Redevelopment project and to complete the financial strategy aimed at moving the Asan residents into completing their rehabilitation projects and or move them into constructing their homes.
6. Track progress of the CAHAT program and Lada Estates progress for making available homeownership for low income and moderate income families.
7. Track progress of GHURA's Astumbo Project - infrastructure development and how home financing needs of these families and those under the Asan project can be referred to the various CAHAT and/or Farmers Home Loan Administration programs.
8. Review progress on Farmers Home Loan application for 50 units to determine when application can be completed.
9. Develop application for next year's Hope I planning grant.
10. Track progress and implementation schedule of our FY90 to 92 CDBG funds for Asan Redevelopment Project.
11. Track progress of FY91 CIAP funds usage and FY92 Comp Grant application which is to address repair, upgrading and modernization needs of our low income public housing units under GHURA's overall stock.

1. MONITORING PLAN

GHURA will monitor developments and the status of progress made by the respective entities with respect to the objectives and commitments identified by:

- a) the calling of semi-annual meetings with the organization/agencies providing human and related support services and with the housing and related agencies mentioned in the plan to benchmark the status of their respective programs and projects.
- b) by requesting agencies involved to complete questionnaires/status reports sent out quarterly by GHURA. This status report will request certain data from agencies.

2. REQUIRED CERTIFICATION

The document which is herewith attached contains the required certification(s) which must be a part of our CHAS Plan.

COMPREHENSIVE HOUSING AFFORDABILITY STRATEGY (CHAS)

CERTIFICATION

The jurisdiction hereby certifies that it will affirmatively further fair housing in the administration of housing and community development activities in the private and public sectors. The jurisdiction further certifies that it will maintain supporting evidence which shall be kept available for inspection by the Secretary, the Inspector General, and the public.

Signature _____
Certifying Official

CERTIFICATION

The jurisdiction hereby certifies that it will comply with the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, implementing regulations at 49 CFR 24, and the requirements governing the residential antidisplacement and relocation assistance plan under Section 104(d) of the Housing and Community Development Act of 1974 (including a certification that the jurisdiction is following such a plan).

Signature _____
Certifying Official

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