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Final Report

2018 Estimates of Compact of Free Association (COFA) Migrants



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BACKGROUND

Introduction

The Compacts of Free Association are joint congressional-executive agreements between the United States and the Federated States of Micronesia, the Republic of the Marshall Islands, and the Republic of Palau. These agreements establish, in part, that citizens of the aforementioned areas may enter, engage in occupations, and establish residence as nonimmigrants in the United States and their territories and possessions.

The Compact of Free Association Amendments Act of 2003 introduced the requirement for an enumeration of qualified nonimmigrants (for the purposes of this report they will be referred to as Compact of Free Association, or COFA, migrants) to be conducted no less frequently than every five years in the following jurisdictions: Hawaii, Guam, the Commonwealth of the Northern Mariana Islands (CNMI), and American Samoa. This enumeration would serve as the basis for apportioning \$30 million in funding annually to these jurisdictions for a range of development programs and other benefits as a result of the in-migration of COFA migrants.

In accordance with the Compact of Free Association Amendments Act of 2003 (Public Law 108-188), the U.S. Department of the Interior signed an Interagency Agreement (IAA) with the U.S. Census Bureau to produce estimates of COFA migrants for 2018. This report outlines the methodology used by the Census Bureau to produce the 2018 estimates of COFA migrants and details the resulting estimates for each jurisdiction.

Definitions

A COFA migrant is defined as “a person, or their children under the age of 18, admitted or resident pursuant to section 141 of the U.S.-RMI or U.S.-FSM Compact, or section 141 of the U.S.-Palau Compact who, as of a date referenced in the most recently published enumeration is a resident of an affected jurisdiction.” The date of residency for COFA migrants is determined by the effective date of the agreement, which is 1986 for the U.S.-Republic of the Marshall Islands and the U.S.-Federated States of Micronesia Compacts, and 1994 for the U.S.-Palau Compact.

Thus, from the above statement there are two types of persons to estimate:

1. COFA migrants – Defined as a person born in the Republic of the Marshall Islands or the Federated States of Micronesia, and who entered American Samoa, CNMI, Guam, or Hawaii in 1986 or later or born in the Republic of Palau, and who entered American Samoa, CNMI, Guam, or Hawaii in 1994 or later.

2. The children and grandchildren of the COFA migrant – Defined as a person under the age of 18 and never married regardless of the child’s place of birth and year of entry. Children includes biological, adopted, and step children.

All Island residents will be considered, regardless of their residency status (household or facility-based) or citizenship status.

Overview of Methodology

The Census Bureau and the Department of the Interior agreed to the following methodology for producing the 2018 estimates of COFA migrants:

1. Tabulate existing data to estimate the number of COFA migrants residing in Hawaii, American Samoa, and the area of CNMI outside of Saipan in 2018.
 - a. Hawaii – To produce estimates of COFA migrants residing in Hawaii in 2018, the Census Bureau concatenated data for 2015, 2016, and 2017 from the American Community Survey (ACS). The ACS is collected every month from a representative sample of addresses selected from updated address registers.
 - b. American Samoa – To produce estimates of COFA migrants residing in American Samoa in 2018, the Census Bureau used data from the 2010 Census that included a complete enumeration of all living quarters.
 - c. The area of CNMI outside of Saipan – To produce estimates of COFA migrants residing in the area of CNMI outside of Saipan in 2018, the Census Bureau used data from the 2010 Census that included a complete enumeration of all living quarters.
2. Conduct the 2018 Survey of Compact of Free Association (COFA) Migrants to estimate the number of COFA migrants residing in Guam and Saipan, CNMI in 2018.
 - a. Guam – To produce estimates of COFA migrants residing in Guam in 2018, the Census Bureau collected information in 2018 from a representative sample of blocks selected based on results from the 2010 Census. The Census Bureau then canvassed the selected blocks to obtain a current listing of all living quarters in the selected blocks. In some instances, the Census Bureau then sub-sampled the living quarters in the selected blocks, depending on the number of living quarters listed during canvassing.
 - b. Saipan, CNMI – To produce estimates of COFA migrants residing in Saipan, CNMI in 2018, the Census Bureau collected information in 2018 from a representative sample of blocks selected based on results from the 2010 Census. The Census Bureau then canvassed the selected blocks to obtain a current listing of all living quarters in the selected blocks. In some instances, the Census Bureau then sub-

sampled the living quarters in the selected blocks, depending on the number of living quarters listed during canvassing.

Timeline

On June 14, 2017, the Department of the Interior signed an Interagency Agreement with the Census Bureau to produce the estimates of COFA migrants for 2018. In early October 2017, Census Bureau staff traveled to Guam and CNMI to discuss the proposed methods for producing the estimates and, more specifically, to gain local cooperation for the 2018 Survey of COFA Migrants. The Census Bureau then began preparations for field activities, which included OMB approval, designing survey questionnaires, and creating instructional materials.

On July 3, 2018 and August 13, 2018, the Census Bureau signed contracts with the Secretary of Commerce of CNMI and the President of the University of Guam, respectively, that gave the local governments the authority and funds to hire and manage local staff who would serve as interviewers responsible for collecting the information for the survey.

Block canvassing began in Saipan, CNMI on July 16, 2018 and in Guam on July 30, 2018. Block canvassing was completed in Saipan, CNMI on July 28, 2018 and in Guam on August 15, 2018.

Field enumeration began in Saipan, CNMI on August 30, 2018 and in Guam on October 10, 2018. Field enumeration activities were completed in Saipan, CNMI on October 5, 2018 and in Guam on December 10, 2018.

The Census Bureau then scanned and keyed from image the information on the completed questionnaires into electronic datasets, imputed any missing values in the datasets, edited the information according to standard editing principles, and tabulated and weighted the number of COFA migrants for release.

The special tabulations of ACS data for Hawaii and 2010 Census data for American Samoa and the areas of CNMI outside of Saipan were included, and the final estimates for all jurisdictions were provided to the Department of the Interior on April 26, 2019.

RESULTS

The Census Bureau estimates that there were 38,114 COFA migrants residing in the four jurisdictions combined (Hawaii, Guam, CNMI, and American Samoa) in 2018. Guam had the highest number of COFA migrants in 2018 with Hawaii having the next highest at 18,874 and 16,680, respectively.¹ About 93 percent of all COFA migrants in 2018 resided in Guam or Hawaii among these four jurisdictions.

Table 1. 2018 Estimate of COFA Migrants: All Jurisdictions

Jurisdiction	Estimate	Margin of error (\pm) ¹
Guam	18,874	+/- 3,836
Hawaii	16,680	+/- 2,196
CNMI	2,535	+/- 654
American Samoa	25	X

X Not applicable.

¹ Data are based on a sample and are subject to sampling variability. A margin of error is a measure of an estimate's variability. The larger the margin of error in relation to the size of the estimate, the less reliable the estimate. This number when added to and subtracted from the estimate forms the 90 percent confidence interval.

Source: U.S. Census Bureau, 2015, 2016, and 2017 American Community Survey (Hawaii), 2018 Survey of Compact of Free Association (COFA) Migrants (Guam and Saipan, CNMI), and 2010 Census (American Samoa and area of CNMI outside of Saipan).

Understanding Margin of Error

The estimates for Guam, Hawaii, and CNMI in Table 1 are based on a sample and are subject to sampling variability, and the degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error.² Table 1 also shows the margins of error for the Guam, Hawaii, and CNMI estimates at a 90-percent confidence interval. A 90-percent confidence interval provides a range of possible values for which we are 90 percent confident that it contains the true value of the estimate. The 90-percent confidence interval is

¹ The number of COFA migrants residing in Guam is not statistically different from the number of COFA migrants residing in Hawaii.

² Part of the estimate for CNMI (the area of CNMI outside of Saipan) and the estimate for American Samoa were based on the 2010 Census results – which are derived from a complete enumeration of the population, not a sample of the population.

constructed from the lowest possible value (the estimate minus the margin of error) and the highest possible value (the estimate plus the margin of error).

Although there is a range which we are 90 percent confident contains the true number of COFA migrants, for the purposes of this project, the Census Bureau is recommending the use of the estimates reported in Table 1 as the best estimate of COFA migrants in 2018.

METHODOLOGY

The Census Bureau's guiding principles for producing the 2018 estimates of COFA migrants were to (1) produce quality information while (2) following standard Census Bureau practices and (3) conducting cost-effective activities. The following strategies were implemented to achieve these goals:

1. Follow standard procedures developed by the Census Bureau to produce high quality results. This included implementing standardized training and field enumeration procedures, reinterview and quality assurance procedures, and data tabulation and disclosure avoidance procedures.
2. Obtain approval from the Office of Management and Budget for all data collection efforts. This included obtaining approval for the methodology employed for selecting possible respondents (sample selection) and for minimizing respondent burden.
3. Whenever possible, use data and information currently available to maintain cost control. This included using information from the 2010 Census for American Samoa and the area of CNMI outside of Saipan, and information from the ACS for Hawaii.

Employing the strategies discussed above, the Census Bureau proposed and implemented the following methodology for producing the 2018 estimates of COFA migrants in each jurisdiction.

Guam

To produce estimates of COFA migrants residing in Guam in 2018, the Census Bureau designed and implemented the 2018 Survey of COFA Migrants in Guam. The information for this survey was collected between October 10 and December 10, 2018.

Because the Census Bureau has not collected information on Guam's population since the 2010 Census, we designed a survey for Guam to produce results that were comparable in accuracy to the average of the 2015-2017 one-year estimates from the ACS that were available for Hawaii. This survey, the 2018 Survey of COFA Migrants, employed a stratified random sample of all

living quarters (housing units and group quarters) in Guam designed to produce estimates with a similar coefficient of variation as the estimates from ACS for Hawaii.³

The total sample size in Guam was 123 blocks resulting in 4,945 sample units. For more information on the methods and procedures for the 2018 Survey of COFA Migrants, see the 2018 Survey of Compact of Free Association (COFA) Migrants Source and Accuracy Statement (U.S. Census Bureau, 2019).

The 2018 Survey of COFA Migrants in Guam achieved a final response rate of 95.1 percent.

Hawaii

To produce estimates of COFA migrants residing in Hawaii in 2018, the Census Bureau concatenated the 2015, 2016, and 2017 one-year files from the ACS.

The ACS is a nationwide survey designed to generate continuous measurement of the population in the United States and Puerto Rico. The ACS replaces the traditional long form of the decennial census by collecting and producing population and housing information every year instead of every ten years.

For more information on the methods and procedures of the ACS, see ACS Design and Methodology Report, available at <https://www.census.gov/programs-surveys/acs/methodology/design-and-methodology.html>.

For more information on the sample size and response rate for the Hawaii ACS, see ACS Sample Size and Data Quality, available at <https://www.census.gov/acs/www/methodology/sample-size-and-data-quality/>.

Commonwealth of the Northern Mariana Islands

To produce estimates of COFA migrants residing in CNMI in 2018, the Census Bureau designed and implemented the 2018 Survey of COFA Migrants in Saipan, CNMI. The information for this survey was collected between August 30 and October 5, 2018.

Because the Census Bureau has not collected information on CNMI's population since the 2010 Census, we designed a survey for Saipan, CNMI to produce results that were comparable in accuracy to the average of the 2015-2017 one-year estimates from the ACS that were available for Hawaii. This survey, the 2018 Survey of COFA Migrants, employed a stratified random

³ The coefficient of variation is the ratio of the standard error (square root of the variance) to the value being estimated, usually expressed in terms of a percentage (also known as the relative standard deviation). The lower the coefficient of variation, the higher the relative reliability of the estimate.

sample of all living quarters (housing units and group quarters) in Saipan, CNMI designed to produce estimates with a similar coefficient of variation as the estimates from ACS for Hawaii.

The total sample size in Saipan, CNMI was 91 blocks resulting in 2,193 sample units. For more information on the methods and procedures for the 2018 Survey of COFA Migrants, see the 2018 Survey of Compact of Free Association (COFA) Migrants Source and Accuracy Statement (U.S. Census Bureau, 2019).

The 2018 Survey of COFA Migrants in Saipan, CNMI achieved a final response rate of 94.7 percent.

Area of CNMI outside of Saipan

To produce estimates of COFA migrants residing in the area of CNMI outside of Saipan, the Census Bureau used the results of the 2010 Census, which have a reference date of April 1, 2010.

Because the Census Bureau has not collected information on CNMI's population since the 2010 Census and only a very small proportion of COFA migrants reside in the area of CNMI outside of Saipan, we determined that the most cost-effective method for producing estimates of COFA migrants for the area of CNMI outside of Saipan was to use data from the 2010 Census for these areas. The 2010 Census was a complete enumeration of residents in all housing units and group quarters with a reference date of April 1, 2010. This comparability of results allowed us to combine 2010 Census data with the results of the 2018 Survey of COFA Migrants in Saipan, CNMI and to be able to compare the combined estimates with the ACS results for Hawaii.

For more information on the methods and procedures of the 2010 Census, see the 2010 Decennial Census Program Management at <https://www.census.gov/programs-surveys/decennial-census/decade/2010/program-management.html>.

American Samoa

To produce estimates of COFA migrants residing in American Samoa, the Census Bureau used the results of the 2010 Census, which have a reference date of April 1, 2010.

Because the Census Bureau has not collected information on American Samoa's population since the 2010 Census and only a very small proportion of COFA migrants reside in American Samoa, we determined that the most cost-effective method for producing estimates of COFA migrants for American Samoa was to use data from the 2010 Census. The 2010 Census was a complete enumeration of all housing units and group quarters residents with a reference date of April 1, 2010. This comparability of results allowed us to compare the final estimates for American Samoa with the ACS results for Hawaii.

For more information on the methods and procedures of the 2010 Census, see the 2010 Decennial Census Program Management at <https://www.census.gov/programs-surveys/decennial-census/decade/2010/program-management.html>.

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