

MEMORANDUM

To: Debra A. Levine and Lewis M. Hoppe, Co-Executive Directors

From: Isaac Fefer, Senior Demographer
Bruce Ruiz, GIS Manager
Marisa Vallvé, Senior GIS Analyst

Date: January 5, 2012

Re: Census Data Adjustment

Introduction

On August 11, 2010, Chapter 57 of the Laws of 2010 was signed into law by Governor Paterson. Part XX of the law directed the New York State Department of Corrections and Community Supervision (DOCCS) to provide the Task Force with information on incarcerated persons under its jurisdiction as of April 1, 2010, the date of the federal decennial census count. The objective of Part XX is to: adjust the Census for state and local redistricting purposes by removing prisoners from where they are incarcerated and placing them at their residences prior to incarceration.

This memo describes how the data were first geocoded and then how the Task Force technical staff implemented census data adjustment, as mandated by Part XX.

The adjustment process consists of the following stages: (1) subtraction; (2) addition (reallocation); and (3) production of data files and reports. Specifically, adjustment involves: subtraction of all prisoners (state and federal), the addition of prisoners whose addresses were geocoded successfully, and the production of data files and reports using the adjusted data.

Prisoner Address Geocoding

In order to assign census blocks to prisoner address records, the geocoding software MapMarker V24.0 from the company MapInfo (now named Pitney Bowes Business Insight) of Troy, NY was used. The software analyzed addresses, looking for a match in United States Postal Service (USPS) data, then assigned a latitude/longitude coordinate and a census-block identifier, based on an enhanced Census Bureau TIGER street database. The software was able to assign geographic coordinates for the addresses of 46,003 prisoners.

Census Bureau's 2010 Advance Group Quarters Data

This file contains data, down to the census-block level, on prisoners (see attachment #4).

The group-quarters-population table in the file contains one cell, "correctional facilities for adults." This figure is the sum of: (1) federal detention centers; (2) federal prisons; (3) state prisons; (4) local jails and other municipal confinement facilities; (5) correctional residential facilities; and (6) military disciplinary barracks and jails.

The Census Bureau's 2010 Summary File 1 (SF 1) does contain breakdowns by prison type by race and ethnicity, but only at the census-tract level (see attachment #8).

Data Preparation

The Task Force technical staff created three statewide block-level files, which included every category necessary to accommodate the adjusted data and to make the DOCCS data compatible with PL 94-171 (see attachment #5). Since DOCCS did not contain categories for Hawaiian or Multiracial, such values were assumed to be zero. One file was generated with all of the geocoded prisoner addresses and racial/ethnic information from DOCCS (to be added to PL 94-171). Another file was created through aggregating racial and ethnic information by correctional facility and then disaggregating when prisons were located on multiple blocks (proportional to PL 94-171 total population for the blocks involved; later rounded to integers). A third block-level file was produced for federal prisoners. The federal-prisoner population (using Census Bureau Advance Group Quarters data) is equal to the total population (using PL 94-171 data) for these blocks. For the Otisville federal prison (which shares a block with the DOCCS Otisville prison), racial and ethnic information were derived by subtracting DOCCS data from PL 94-171. The DOCCS and federal prisoner population (using Census Bureau Advance Group Quarters data) is equal to the total population (using PL 94-171 data) for this block.

The adjustment is based on:

Adjusted PL = PL + Geocoded prisoner addresses – DOCCS facilities – Federal facilities

as shown in attachment #1.

The Task Force uses these standard racial/ethnic categories (based on PL 94-171 format) in its work:

Total NHWhite NHBlack NHAsian NHAmerIndian NHMultiracial NHHawaiian NHOther Hispanic

(NH = Non-Hispanic)

DOCCS use these demographic categories to classify prisoners:

Race: White Black Asian NativeAmerican(=AmerIndian) Other NotAnswered

Ethnicity: NotHispanic Hispanic Unknown Blank

From these categories, the Task Force technical staff infers:

1. Total White Black NatAmer Asian Multi Hwn Other Unknown

where Unknown includes 601 geocoded prisoners whose race='Not Answered.' See Table 1 in attachment #1 for 2010 population figures.

2. Total Hisp NHWhite NHBlack NHNatAmer NHAsian NHHwn NHMulti NHOther Unknown_Eth

where Unknown_Eth includes 270 geocoded prisoners whose ethnicity= 'U' or blank. See Table 2 in attachment #1 for 2010 population figures.

3. Total_VAP White_VAP Black_VAP NatAmer_VAP Asian_VAP Hwn_VAP Multi_VAP Other_VAP Unknown_VAP

where Unknown_VAP includes 601 geocoded prisoners whose race='Not Answered' and who were born before April 1, 1992 (they were 18 years old by April 1, 2010, the date of the federal decennial census count). See Table 3 in attachment #1 for 2010 population figures.

4. Total_VAP Hisp_VAP NHWhite_VAP NHBlack_VAP NHNatAmer_VAP NHAsian_VAP NHHwn_VAP NHMulti_VAP NHOther_VAP Unknown_VAP_Eth

where Unknown_VAP_Eth includes 270 geocoded prisoners whose ethnicity='U' or blank and who were born before April 1, 1992. See Table 4 in attachment #1 for 2010 population figures.

Subtraction and Negative Numbers

The census adjustment law, Part XX of Chapter 57 of the Laws of 2010, mandates two subtractions: New York State Department of Corrections and Community Supervision (DOCCS) state prisoners and federal prisoners. According to DOCCS, there were 68 DOCCS facilities statewide on April 1, 2010, located on 73 census blocks (see attachment #7). Based on Task Force research, there were 2 federal facilities statewide on April 1, 2010, located on 3 census blocks (Ray Brook, located on 2 blocks; and Otisville, located on 1 block, but the same block as the Otisville DOCCS facility).

Five of the DOCCS facilities are located on multiple census blocks (Clinton, 2 blocks; Hudson, 4 blocks; Fishkill, 2 blocks; Adirondack, 2 blocks; and Butler, 2 blocks in separate towns). The Bare Hill and Upstate DOCCS facilities are located on the same block, as are the Mohawk and Oneida DOCCS facilities.

According to DOCCS, there were 58,237 state prisoners on April 1, 2010. Based on Task Force research, there were 2,471 federal prisoners on April 1, 2010. Hence, the prisoner total to be subtracted is 60,708.

The Ray Brook federal prison is located on two census blocks. The prisoner population (using Census Bureau Advance Group Quarters data) is equal to the total population (using PL 94-171 data) for these two blocks. The Otisville federal prison is located on the same census block as the Otisville DOCCS state prison. The prisoner population (using Census Bureau Advance Group Quarters data) is equal to the total population (using PL 94-171 data) for this block.

For this census block, the technical challenge is to derive federal prisoners (the unknown quantity) by removing state prisoners (using DOCCS data) from total population (using PL 94-171 data).

TotalPop = DOCCS + Federal
 1,745 = 496 + Federal
 1,745 = 496 + 1,249

There is a complication, however. Of these 496 DOCCS state prisoners, 15 are classified by DOCCS in the unknown racial/ethnic category. Since the PL 94-171 data do not have a category for unknown, subtraction yields a -15 figure (i.e., 0 minus 15 = -15). Thus, the adjusted data will contain negative numbers. The Task Force technical staff considers this contingency to be acceptable as a by-product of the information received from DOCCS.

Addition (Reallocation)

For prisoner addresses, 46,003 of 58,237 (78.99%) were successfully geocoded to 24,245 unique 2010 census blocks, distributed among all counties statewide. (This figure represents 6.9% of the 350,169 unique 2010 census blocks statewide.)

End Products

The adjusted PL 94-171 data, generated at the block level, have been aggregated to the following geographic summary levels: state, county, minor civil division (MCD), voting tabulation district (VTD), and census block. The aforementioned geographic summary levels can be obtained from the Task Force's website.

The adjusted dataset is broken down by age, using both the standard Task Force and the federal Department of Justice (DOJ) racial and ethnic categories (see attachments # 3, 6). The number of racial and ethnic categories is kept to a minimum, by using the recommended DOJ tabulations, so as to make these categories manageable for users.

The adjusted dataset will also be used to create revised population reports for current and proposed State Assembly and State Senate districts (see attachment # 2).

Federal Department of Justice (DOJ) Racial/Ethnic Categories

Total Population
 NH White
 NH Black + NH Black&White Biracial
 NH Asian + NH Asian&White Biracial
 NH American Indian + NH American Indian&White Biracial
 NH Hawaiian/Pacific Islander + NH Hawaiian/Pacific Islander&White Biracial
 NH Other Race + NH Other Race&White Biracial
 NH Multiple Race Remainder
 Hispanic
 Unknown
 (Repeated for voting age population)
 (Unknown is added here to conform to DOCCS format)

Summary

The Task Force technical staff adjusted the Census Bureau's Public Law 94-171 data for New York State legislative redistricting. The adjusted data are only mandated for State Senate and State Assembly districts, and not for Congressional districts. Race, ethnicity, and age characteristics were considered during the adjustment process. DOCCS classifications for race and ethnicity differed from those utilized by the Census Bureau. The Task Force technical staff combined dissimilar datasets, PL 94-171 and DOCCS, and accommodated missing prisoner responses. Subsequently, 46,003 prisoners were reallocated based on information that DOCCS collected from prisoners and provided to the Task Force.

Attachments

1. Pop. Spreadsheet (Pop_Check.pdf)
2. Prisoner Counts by 2002 Legislative District (Counts_by_2002_district.pdf)
3. Data Fields (Data_dictionary.pdf)
4. Advance Group Quarters (Adv_Grp_Quart.pdf)
5. PL 94-171 Tables (PL_Tables.pdf)
6. DOJ Variables (DOJ_Vars.pdf)
7. Prison Data (Prison_Blk_Pop.pdf)
8. Summary File 1 (Summ_File_1.pdf)