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## **2010 CENSUS PLANNING MEMORANDA SERIES**

**No. 189**

MEMORANDUM FOR      The Distribution List

From:                      Arnold Jackson [*signed*]  
                                 Acting Chief, Decennial Management Division

Subject:                    2010 Census Shipboard Enumeration Operation Assessment Report

Attached is the 2010 Census Shipboard Enumeration Operation Assessment Report. The Quality Process for the 2010 Census Test Evaluations, Experiments, and Assessments was applied to the methodology development and review process. The report is sound and appropriate for completeness and accuracy.

If you have questions about this report, please contact Brian De Vos at (301) 763-3422.

Attachment

# 2010 Census Shipboard Enumeration Operation Assessment Report

U.S. Census Bureau standards and quality process procedures were applied throughout the creation of this report.

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## **Executive Summary**

The purpose of the 2010 Census Shipboard Enumeration Operation Assessment is to document the results of the enumeration for historical and informational purposes, as well as to provide best practices that can be used during the next planning cycle to support the 2020 Census Shipboard Enumeration Operation. The assessment will also describe the major issues that occurred during the operation and how these issues were resolved. Lastly, the assessment will provide recommendations for future enumeration of individuals residing on vessels.

### **Major Highlights**

- Vessel universe totaled 1,071 military and maritime vessels
- 88,479 Form D-23, Shipboard Census Reports were data captured by the Decennial Response Integration System at the National Processing Center
- 36,615 Form D-23, Shipboard Census Reports contained a “usual home elsewhere” address that matched to a geocodable address and were removed from the Shipboard Enumeration
- In total, 51,864 individuals were tabulated on 434 military and maritime vessels for the 2010 Census which completed all processing, checks and edits. (i.e., 49,473 on 259 military vessels and 2,391 on 175 maritime vessels)
- 29 percent of the planned budget was used

### **Background**

The 2010 Census Shipboard Enumeration Operation, also referred to as the 2010 Census Military/Maritime Vessel Enumeration, was a subset of the 2010 Census Group Quarters Enumeration Operation. The primary goal of the 2010 Census Shipboard Enumeration Operation was to provide an opportunity to include the following individuals in the 2010 Census:

- United States Navy personnel
- United States Coast Guard personnel
- United States merchant marines assigned to or living on vessels on April 1, 2010

The 2010 Census Shipboard Enumeration Operation consisted of two different vessel types, military vessels and maritime vessels. A military vessel is defined as a United States Navy or United States Coast Guard vessel assigned to a homeport in the United States. A maritime vessel is defined as a United States Flag vessel which is a commercial vessel, registered and operated under the laws of the United States, owned and operated by United States citizens, and used in commercial trade of the United States. The 2010 Census eligible United States flagged vessels included all ocean-going, coastal, and Great Lakes ships.

The 2010 Census Shipboard Enumeration Operation was a mail-out/mail-back operation. The Shipboard Census Report was the data collection instrument used to collect respondent



data during the enumeration. Shipboard Census Reports were mailed to every United States Navy and United States Coast Guard vessel assigned to a homeport in the United States and to United States flag vessels.

The Census Bureau requested and received a vessel list from the seven major maritime agencies as well as the United States Navy and United States Coast Guard, which was used to create the vessel universe for the 2010 Census Shipboard Enumeration Operation.

## **Results**

### **What types of issues were encountered during the maritime vessel list development?**

The primary issues encountered during the maritime vessel list development were:

- obtaining vessel lists from the agencies by July 6, 2009
- duplication of vessels across vessel list
- lack of information on vessel list, for example, missing address or phone numbers

### **What types of issues were encountered during the military vessel list development?**

The vessel list that the Census Bureau received from the U.S. Navy was outdated which led to more re-mails than expected.

### **Were there any issues in the printing of the Shipboard Enumeration materials?**

No issues were encountered during the printing of the Shipboard Enumeration materials.

### **What types of issues were encountered during the shipping of enumeration kits/materials to the maritime vessel owner/operators?**

The primary issues encountered during the shipping of enumeration materials to maritime vessels were:

- lack of phone numbers for vessels with outdated addresses
- each vessel was mailed ten percent more materials than the vessel's maximum crew size in order to avoid re-mails. As a result, vessels often complained that they received too many materials and that the extra materials were a waste of taxpayer's money

### **What types of issues were encountered during the shipping of enumeration kits/materials to the military vessels?**

The primary issues encountered during the shipping of enumeration materials to military vessels were:

- mailing materials to vessels assigned to a foreign port

- re-mailing materials to vessels due to outdated addresses
- several vessels stated that they were missing their reply materials

### **How many maritime vessels were in the vessel universe by source?**

In total, 769 vessels (699 vessels on the initial list and 70 vessels added during the operation) were in the vessel universe by source as follows:

- Maritime Administration, 262 vessels
- American Tuna Boat Association, 38 vessels
- Lake Carriers Association, 13 vessels
- Commercial Fisheries Entry Commission and National Marine Fisheries Service, a combined 270 vessels
- National Oceanic and Atmospheric Administration, 19 vessels
- Military Sealift Command, 108 vessels
- Other Maritime, 59

### **How many vessels were listed by the military?**

A total of 302 vessels were listed as follows:

- 257 United States Navy vessels
- 45 United States Coast Guard vessels

### **How many vessels did not return enumeration materials?**

A total of 293 maritime vessels of the 1,071 vessels in the universe (27.4 percent) did not return completed materials and were ineligible (vessel was either not in-scope or did not meet 2010 Census geocoding requirements) to be sent for processing. Most of these non-returns were by maritime administration (100 vessels) and commercial fisheries (120 vessels). All of the military vessels returned their materials.

### **What types of issues were encountered in determining if a vessel was considered in-scope or out-of-scope?**

The residency rules for a maritime vessel were easily understood and there were no issues in determining if a maritime vessel was considered to be in-scope. However, there were some issues in determining if some of the United States Navy vessels were in-scope and those issues included:

- The National Processing Center received materials from three United States Navy vessels that were not on the United States Navy vessel list.
  - One vessel was still in construction
  - One vessel completed construction, but was not in commission for the United States Navy at the time of the 2010 Census

- One vessel was commissioned shortly before April 1, 2010 and was assigned to the homeport San Diego, but had not reached San Diego prior to the final vessel delivery date of July 22, 2010

**What was the number of ungeocodable maritime vessels due to insufficient address information on the Form D-47, Census Location Report for Maritime Vessels?**

The total number of ungeocodable maritime vessels due to insufficient address information was ten.

**How many vessels were coded as being a foreign vessel?**

159 vessels (34 military and 125 maritime) were coded as being a foreign vessel and were out-of-scope for the 2010 Census.

**How many maritime vessels were not processed due to non-receipt of the Form D-47, Census Location Report for Maritime Vessels?**

Sixty-two maritime vessels were not processed due to non-receipt of the Form D-47, Census Location Report for Maritime Vessels.

**What were the differences between the tabulation and the enumeration count of persons on vessels?**

Of the 84,217 Shipboard Census Reports data captured for military vessels, well over half (49,473) were included in the final Census counts. A similar result is seen with the maritime vessels in that well over half (2,391) of its' total SCRs (4,262) were included in the final Census vessel counts. The overall difference between the tabulated and enumeration counts for maritime and military vessels was 36,615 (41.4 percent). A difference in the tabulated and enumeration count was expected based on past history. As seen in previous censuses<sup>1</sup>, a high number of individuals who work on military and maritime vessels have an on-shore address. Individuals who report a UHE address on a SCR were removed from the enumerated Shipboard count and tabulated at the UHE address.

**What types of issues were encountered during the receipt of enumeration materials from military vessels?**

The primary issue encountered during the receipt of enumeration materials from military vessels was receiving completed materials late. Nineteen military vessels sent completed materials one month after the May 15, 2010 deadline. Also, vessel materials were received from vessels that were not on the United States Navy vessel list.

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<sup>1</sup> Findings came from the "History of the Census 2000 Military-Maritime Vessel Enumeration", which was written by Linda Ogle (2000). The document stated that "an average of 60% of the persons aboard military vessels had a UHE and 40% were enumerated as the population of the vessel" (page 28).

**What types of issues were encountered when gathering pier location for the military vessels homeported in San Diego?**

There was a miscommunication on what information was needed for vessels that were out at sea on April 1, 2010. As a result, the Decennial Management Division had to go back and ask the United States Navy for the pier of departure for each of the 19 vessels assigned to the homeport of San Diego. Obtaining the location from where the vessel departed was time consuming since the United States Navy e-mailed the commander of each vessel for the departure pier.

**How many vessels submitted administrative records compared to those vessels that mailed in their materials?**

Out of 549 vessels that were enumerated during the operation:

- 498 vessels submitted completed Shipboard Census Reports
- 33 submitted administrative records
- 18 vessels only submitted a vessel count

**What was the number of vessels enumerated?**

549 vessels (277 military, 272 maritime) sent in completed materials for the operation.

**What was the number of vessels processed?**

434 vessels (259 military, 175 maritime) passed all of the checks and edits and contributed to the 2010 Census tabulations.

**What was the population count?**

In total, 51,864 respondents were counted on 434 vessels for the 2010 Census. Of those, 49,473 respondents were counted on 259 military vessels and 2,391 individuals were counted on 175 maritime vessels.

**What happened to the 1,071 vessels in the vessel universe?**

Out of the 1,071 vessels:

- 434 vessels were included in the final 2010 Census tabulations
- 637 vessels described below were removed from the initial vessel universe:
  - 40 vessels only returned a Form D-46, Acknowledgement of Receipt of Materials
  - 62 vessels returned Shipboard Census Reports but did not return a completed Form D-47, Census Location Report
  - 166 vessels did not return any materials
  - 25 vessels had their materials returned as undeliverable
  - 344 vessels were considered out of scope

- 41 vessels were day trippers
- 94 vessels were dry docked
- 6 vessels were sold for parts/materials
- 11 vessels were decommissioned
- 5 vessels were in dock for repair
- 2 military vessels were under construction
- 159 vessels were foreign vessels
- 10 vessels were ungeocodable
- 1 vessel was checked into the Automated Tracking and Control system without associated Shipboard Census Reports
- 15 vessels were removed from the vessel counts because all of the individuals on the vessel reported a valid usual home elsewhere

### **How many questionnaires reported a usual home elsewhere?**

A mapping problem was discovered in November 2010 during the formalized census unedited file review of the “usual home elsewhere” data for Shipboard Census Reports. The response data for question 8, the “usual home elsewhere” screener question, was inadvertently mapped to the incorrect variables during processing. This programming error occurred because the processing system was designed to capture the “Yes” and “No” responses for both the Individual Census Report and the Shipboard Census Report “usual home elsewhere” screener questions in the same way, but the “Yes” and “No” responses for the D-20, Individual Census Report and D-23, Shipboard Census Report had the exact opposite meaning.

Question number 6 on the Individual Census Report reads, “Do you live or stay in this facility MOST OF THE TIME?” If the respondent answered “Yes” then the respondent does **not** have a “usual home elsewhere”.

Question number 8 on the Shipboard Census Report reads, “Do you have a house, apartment, or mobile home where you usually stay when off duty?” If the respondent answered “Yes” then the respondent had a “usual home elsewhere”.

Once the problem was discovered, the Shipboard Census Report data were reprocessed to resolve the mapping of the “usual home elsewhere” data. After the reprocessing it was found that 57,426 respondents marked “Yes” to question number 8 (has a “usual home elsewhere”) on the Shipboard Census Report. Of these 57,426, there were 20,811 respondents that did not provide an address that matched to the Master Address File. These 20,811 respondents were counted on the vessels and were not affected by the programming error since they did not provide an address that matched to the Master Address File. The remaining 36,615 respondents that marked “Yes” to question number 8 (has an “usual home elsewhere”) on the Shipboard Census Report matched to a good address on the Master Address File. These respondents were removed from the vessel counts, because they provided an address that matched to the Master Address File. Because this data capture and processing error was identified after completion of the Non-ID process and during the final creation of tabulation data files, the Census Bureau determined there was not sufficient time to conduct any further

processing for those person records that matched to a good address on the MAF. That additional processing would have required us to compare the person information on the UHE forms to see if the respondents were already included on the questionnaires for each of the matched addresses. Within the legal deadlines for producing census results, there would not have been time to conduct this matching, nor any additional field/telephone followup that might have been required for situations where matching was inconclusive. Because we determined that we did not have time for the additional processing, we had two options--(1) assume all those persons had been included on the census household rosters for those matched UHE addresses, and thus would be included in the census count at those locations, or (2) assume all those persons had not been included on the rosters at the UHE addresses, and thus should be tabulated as part of the group quarters population on the vessels where they filled out the UHE forms. The Census Bureau chose option (1) because past history and research<sup>2</sup> has shown us that these respondents were very likely to have been included on the household roster of the reported UHE address. The determination that there was not sufficient time to do the additional processing, and the choice of option (1), were made by the Decennial Leadership Group--the Senior Executive Staff responsible for the highest-level decision-making and oversight for the 2010 Decennial Census.

**Were there notable differences for the usual home elsewhere information for vessels that submitted administrative records compared to those vessels that mailed in their materials?**

It was found that 64.7 percent of the 85,522 Shipboard Census Reports submitted via mail returns had a usual home elsewhere entered on the Shipboard Census Report compared to 71.6 percent of the 2,957 Shipboard Census Reports completed via administrative records that had a usual home elsewhere indicated, a difference of 6.9 percent.

**What was the percent of stateside usual home elsewhere addresses provided for vessels geocoded as being foreign compared to vessels geocoded as being stateside?**

Stateside vessels provided a greater percentage of stateside usual residence elsewhere addresses on their Shipboard Census Reports (64.9 percent) compared to foreign vessels (25.3 percent).

**Were there any language issues?**

There were no reports of language issues.

**Did the 2010 Census Shipboard Enumeration Operation meet the scheduled deadlines?**

The 2010 Census Shipboard Enumeration Operation had 48 activities on the Master Activity Schedule and of those:

- 24 activities were either completed early, on time, or less than six days after the due date.

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<sup>2</sup> During the 1990 Census, 82.6 percent of individuals who completed a SCR and reported an UHE address, were matched to an individual on the UHE's household roster (Wajer, 1993).

- 24 of the activities on the Master Activity Schedule were completed six days or more after the due date

### **Was the 2010 Census Shipboard Enumeration Operation under or over budget?**

The budget for the 2010 Census Shipboard Enumeration Operation was \$422,405 while the expenditures were \$121,275.

### **What was the number of staff assigned to the project?**

The 2010 Census Shipboard Enumeration Operation did not use field staff for the operation. The operation was conducted via self-enumeration through the use of mail-out/mail-back procedures.

### **Major lessons learned for the 2010 Census Shipboard Enumeration Operation:**

- Maintaining a strong relationship with all maritime or military agencies has a positive effect on the response rate received from the vessels. Communicating with the agencies at least one year in advance is critical to the success of the Census.
- Expand the Census Joint Service Working Group to include the primary point of contact for the Military Sealift Command.
- Generic vessel kits should be used for future censuses.

### **Recommendations**

The Shipboard Team used the lessons learned from the 2010 Census Shipboard Enumeration Operation to develop a list of recommendations for future censuses concerning the enumeration of military and maritime vessels. Each of the recommendations below could have cost and/or time savings for the future while maintaining the collection of quality data.

- **Conduct a review of the selection of tabulation blocks for military vessels prior to the data being finalized. Add this review to the Master Activity Schedule for the 2020 Census and have the review signed off on by at least two Branch Chiefs, with one of the Branch Chiefs being from the Geography Division.** The Census Bureau selected collection blocks for the military homeports prior to the 2010 tabulation blocks being defined. In selecting the collection block to represent vessels located in Coronado, California, the Census Bureau unknowingly selected a collection block that contained five tabulation blocks, one of which was located in the City of San Diego. The vessels that were located in Coronado ended up being tabulated in the one tabulation block located in the City of San Diego. The vessels were placed in the tabulation block located in the City of San Diego after they completed the 2010 Census Tabulation Block Geocoding hierarchy process. Since the vessels did not have a map spot or city-style address, the 2010 Census Tabulation Geocoding process had to use the last

step in the geocoding hierarchy, which was, selecting the largest tabulation block within the collection block. In this case, the largest tabulation block within the collection block assigned to Coronado vessels was the tabulation block located in the City of San Diego. As a result, vessels were incorrectly tabulated to the City of San Diego, when they should have tabulated to Coronado. A post tabulation review of military vessels could have caught this error prior to the data being finalized.

- **Have the United States Navy and United States Coast Guard review and approve a collection block for each military homeport.** In order to avoid issues in the future with the geocoding of military homeports it is recommended that detailed maps with the suggested collection block be reviewed and approved by a representative from the United States Navy and United States Coast Guard. This would allow the Census Bureau to confirm that the homeports are correctly assigned to a collection block located on a military installation.
- **Conduct research to determine how electronic transfer of data could be used for enumeration to eliminate the shipping of all vessel materials.** The turnaround time for collecting census data would be much shorter if the Census Bureau eliminated the need to mail materials to and from the vessels. By giving the vessels an option of completing census materials electronically, the Census Bureau could shorten the enumeration time and save money in shipping costs.
- **Add a pier location question to the Form D-47, Census Location Report for Military Vessels.** This would assist with the geocoding of vessels assigned to a multi-jurisdictional homeport that are either docked or out at sea on Census Day. This would cut down on the amount of work that the United States Navy would have to do in helping the Census Bureau geocode vessels assigned to multi-jurisdictional homeports, such as San Diego.
- **Review the residency rules for vessels sailing to or from foreign ports prior to the 2020 Census.** The Maritime Administration suggested that the Census Bureau revise the residency rules to consider vessels sailing to or from a stateside port to a foreign port be included in the 2010 Census. For the 2010 Census, there were 1,305 respondents on maritime vessels which could have been included in the final 2010 Census tabulations had the Census Bureau revised the residency rules regarding foreign vessels.
- **Send detailed guidance to owner/operators informing them of the criteria for being included in the Shipboard operation. Request confirmation is sent to the Census Bureau that their vessel does or does not meet the criteria.** This would save money by not having to ship materials to vessels that are out-of-scope for the operation.



## **Conclusion**

The enumeration of military and maritime vessels continues to be a challenge. The procedures planned and executed for the operation were effective in collecting and tracking materials from the vessels, which was conducted on time and under budget. Maintaining a strong relationship with the major maritime and military agencies prior to and during the operation is critical to a successful enumeration. A strong working relationship between the Census Bureau and the following agencies yielded a 100 percent response rate: The National Oceanic and Atmospheric Administration, Lake Carriers Association, United States Navy, and United States Coast Guard.

# **1. Introduction**

## **1.1 Scope**

The purpose of the 2010 Census Shipboard Enumeration Operation Assessment is to document the results of the 2010 Census Shipboard Enumeration Operation for historical and informational purposes, and to recommend practices that can be used during the next planning cycle to support the 2020 Census Shipboard Enumeration operation. In addition, the 2010 Census Shipboard Enumeration Operation Assessment will record data on the two vessel types (military and maritime), the creation of the Shipboard Enumeration operation universe, management of the Shipboard Enumeration operation universe, geocoding of the vessels, and the outcome of the Shipboard Enumeration operation. The 2010 Census Shipboard Enumeration Operation Assessment will also describe the major issues that occurred during the 2010 Census Shipboard Enumeration operation and how these issues were resolved. Lastly the 2010 Census Shipboard Enumeration Operation Assessment will provide recommendations for future census shipboard enumeration operations.

## **1.2 Intended Audience**

The audience for the assessment is senior management, the 2010 Census Shipboard Enumeration Team, the Group Quarters Enumeration Operation Integration Team (GQEOIT), and divisions directly responsible for the planning, preparation, and/or implementation including:

- *Decennial Management Division (DMD)*
- *Decennial Statistical Studies Division (DSSD)*
- *Decennial Systems and Processing Office (DSPO)*
- *Field Division (FLD)*
- *National Processing Center (NPC)*
- *Geography Division (GEO)*
- *Population Division (POP)*
- *Center for Survey Measurement (CSM)*
- *Decennial Response Integration System (DRIS)*

# **2. Background**

## **2.1 Census 2000 Shipboard Enumeration**

In Census 2000, the United States (U.S.) Navy, and U.S. Coast Guard were self-enumerating. The vessels conducted their own enumeration using Census Bureau guidelines, and mailed the forms back to the U.S. Census Bureau's National Processing Center (NPC) in Jeffersonville, Indiana. The U.S. Navy and U.S. Coast Guard provided vessel lists and mailing addresses for their vessels. The Census Bureau mailed the Shipboard Enumeration materials to the military vessels with the use of addresses provided by the U.S. Navy and

U.S. Coast Guard. These materials contained a number of Form D-23, Shipboard Census Reports (SCRs) and Form D-21, Military Census Reports (MCRs) based on the vessel size. MCRs and SCRs were only mailed to the seven vessels that contained a Marine Expeditionary Unit and the Marines were asked to complete the MCR and not the SCR. The remaining U.S. Navy and U.S. Coast Guard vessels were only mailed SCRs. Crew members and civilians aboard the vessels were able to claim a “usual home elsewhere” (UHE) on the SCR or MCR if they had a residence elsewhere. These persons received a census form at their UHE address as well as on board the vessel and were instructed to complete both forms (Ogle, 2000).

In the Census 2000 Shipboard Enumeration, maritime vessels were also self-enumerating. Vessel lists and addresses were provided by the Maritime Administration (MARAD), National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service, Alaska Department of Fish and Game, U.S. Tuna Foundation, Military Sea Lift Command (MSC), and the Lake Carriers Association. NPC mailed materials to the current operators who then forwarded the materials to eligible American flagged vessels. Eligible American flagged vessels included: all ocean-going, coastal, and Great Lakes ships. The materials included a number of SCRs based on the vessel’s crew size and a Form D-47, Location Report for American Flag Vessels. The captain of the vessel mailed the completed SCRs and Form D-47, Census Location Report for American Flag Vessels back to the NPC (Ogle, 2000).

Once military and maritime vessel materials were received by NPC, clerks identified persons reporting a UHE and the Decennial Systems and Contracts Management Office (DSCMO) initiated steps to ensure that these people were counted at their UHE address. NPC then checked-in the materials, reviewed, sorted, and keyed the SCR data. NPC then geocoded the maritime vessels’ port locations and assigned the geocodes to the vessels. For military vessels, NPC entered the geocodes that were given to the vessels based on their homeport assignments prior to enumeration. Once all the data were complete, NPC sent the data file to the DSCMO for further processing, including the unduplication of multiple enumerations for the same individual (Ogle, 2000).

## **2.2 2010 Census Shipboard Enumeration**

The 2010 Census Shipboard Enumeration Operation was conducted under the auspices of the 2010 Census Group Quarters Enumeration (GQE) Operation designed to enumerate people residing on U.S. military ships or on maritime vessels in operation at the time of the census. SCRs were distributed to every U.S. Navy and U.S. Coast Guard vessel assigned to a homeport in the U.S. and to U.S. flag vessels. A U.S. flag vessel is defined as a commercial vessel, registered and operated under the laws of the U.S., owned and operated by U.S. citizens, and used in commercial trade of the U.S.

The 2010 Census Shipboard Enumeration Operation consisted of several important enhancements since Census 2000, which included:

- changed the procedures for geocoding military vessels assigned to the homeport of San Diego

- used a one-page SCR instead of the six-page SCR
- assembled the vessel kits in a more efficient way
- improved the tracking and controlling of materials received at the NPC

There was also one change in the procedures for geocoding military vessels assigned to the multi-jurisdictional homeport of San Diego. The change in the procedure was designed to improve the accuracy of where the vessels were counted and to give each of the jurisdictions an equal opportunity to receive tabulations for the vessels. In Census 2000, if a vessel was docked on April 1, 2000 then the vessel was counted at the jurisdiction of the homeport where it was docked; the same procedure was followed in the 2010 Census. If the vessel was out at sea, in Census 2000, then the vessel was counted in the City of San Diego as a default with the exception of aircraft carriers, which were counted in Coronado, CA. In the 2010 Census, the procedures were changed so that crews of vessels out at sea on April 1, 2010 were counted at the dock from which they last sailed.

The SCR used for the 2010 Census consisted of the five basic demographic questions (name, sex, age, Hispanic origin, and race) asked of the entire population and three additional questions which were specific to vessels. The SCR asked the individual the name of the vessel in which they were assigned, the operator of the vessel, and whether or not the individual had a UHE and, if so, the address of the UHE. The SCR was developed by the 2010 Census Shipboard Team and the Content and Forms Design Integrated Product Team and was not tested in the field prior to use in the 2010 Census.

Improvements were made in the kit assembly for the 2010 Census. A kit contains all of the necessary 2010 Census forms (SCRs, introductory letter, self-enumeration guide, etc.) and mail back materials for the vessels to perform self-enumeration (See Attachment O for kit content details). For Census 2000, vessel kits were assembled individually for each of the vessels based on the vessel's crew size. For the 2010 Census, seven generic vessel kits were developed to increase the speed of assembling the vessel kits. One master kit and operator kit were developed for the maritime vessels and these kits included maritime-specific instructions and promotional materials. Through the creation of generic vessel kits, the NPC was able to assemble and mail out the vessel kits much quicker and at a cost lower than estimated for creating individual vessel kits for each of the vessels. More details on the kit specifications can be found in section 2.2.7 (Monaghan, 2009).

For the 2010 Census, all materials were checked into the Automated Tracking and Control (ATAC) system at the NPC. ATAC was made available to the Decennial Management Division (DMD) staff at headquarters, which allowed easier reporting to senior management. ATAC allowed the users to update the vessel's address, check in materials received from the vessel, capture geocoding information, link the SCR to the vessel identification number, and provide real time progress reports.

## ***2.2.1 Universe Creation and Maintenance***

### **A. Military Universe**

In January 2009, the Census Bureau requested a comprehensive list of all military vessels and key information pertaining to each vessel from the U.S. Navy and U.S. Coast Guard. An Excel spreadsheet was created and e-mailed to representatives from the U.S. Navy and U.S. Coast Guard, which contained the following headers:

1. Vessel Name
2. Assigned Homeport
3. Box Number or House Number/Street Name
4. City
5. State
6. ZIP Code
7. Maximum Crew Size

The U.S. Navy and U.S. Coast Guard representatives filled out the spreadsheet and returned it to the Census Bureau. This list was loaded into ATAC for inventory control and used to create the initial mail-out universe for kits. The original workload consisted of 295 vessels (Vitrano, 2009b).

### **B. Maritime Universe**

Similarly, in January 2009, the Census Bureau contacted the seven major maritime agencies (MARAD, American Tuna Boat Association, Lake Carriers Association, Commercial Entry Commission, National Marine Fisheries Service, NOAA, and the Military Sealift Command) requesting a list of their U.S. flagged vessels and key information pertaining to each vessel. An Excel spreadsheet was created and e-mailed to representatives from the maritime agencies and contained the following headers:

1. Operator Name
2. Operator Mailing Address
3. City
4. State
5. ZIP Code
6. Operator Telephone
7. Operator Contact Name
8. Vessel Name
9. Estimated Crew Size

The maritime agencies filled out the spreadsheet and returned it to the Census Bureau. This list was loaded into ATAC for inventory control and was used as the initial mail-out universe for kits and reminder letters. The original workload for maritime vessels was 699 vessels (Vitrano, 2009a).

The combined Military Universe and Maritime Universe were known as the Master Vessel Universe.

### **C. Maintaining the Universe**

The NPC and DMD called the vessel points of contacts (POCs) to obtain missing information and/or to clarify ambiguous information from the lists. A number of owners/operators called or e-mailed the Census Bureau and provided circumstances that excluded their vessels from the enumeration universe. Those vessels were removed from the universe and any further processing. The total for each of these circumstances are in parentheses below.

- Vessel was a day-tripper (vessel made daily fishing trips) (41).
- Vessel was dry-docked (94).
- Vessel was sold for parts and/or materials (scrapped) (6)
- Vessel was decommissioned (11).
- Vessel was in dock for repair (5).
- Vessel met foreign port criteria (70).
- Out of Scope (not owned by military) (2).

Owners/operators called, e-mailed, or sent in Form D-34, Census 2010 Information for U.S. Flag Vessels, notifying the Census Bureau of additional vessels, which were to be added to the universe. By the end of the operation, the NPC had added 70 vessels to the initial vessel universe, yielding a final maritime vessel universe of 769 (initial 699 plus 70 added). (See Table 1 in Results)

#### ***2.2.2 Enumerating Military Personnel***

##### **Enumeration Process**

The military population consisted of U.S. Navy personnel, U.S. Coast Guard personnel, and Marines being transported on U.S. Navy vessels. Each vessel was assigned a Project Officer to serve as the primary contact and to coordinate enumeration activities on board each vessel. The Project Officer may have assigned one or more Division Representatives as needed to assist in the process (Anderson and De Vos, 2010).

A high-level outline of the military enumeration process is below.

1. The Census Bureau requested a list of military vessels, mailing addresses, and maximum population capacity.
2. The NPC assembled and mailed vessel kits containing enumeration and promotional materials to each vessel via USPS Priority Mail.
3. The Project Officer immediately completed and returned Form D-46, Acknowledgement of Receipt of Shipboard Census Materials postcard and requested additional materials, if needed. Some vessels acknowledged via e-mail instead of sending in the Form D-46.

4. Upon receiving the materials, the Project Officers were sworn to protect Title 13 materials.
5. Project Officer displayed promotional materials and distributed enumeration materials to personnel.
6. Respondents completed a Form D-23, SCR – even if they had a UHE, or if someone else may have counted them at home. They placed the completed form in the Form D-40, Confidentiality Envelope, sealed it, and returned it to the Project Officer or Division Representative.
7. The Project Officer ensured all forms were accounted for and mailed them back to the NPC in one or more USPS Priority Mail flat rate packages.

### **Submarine Crews**

Crews of submarines who were not at sea on April 1, 2010 received kits and completed the enumeration process using the instructions provided. Crews of submarines who were at sea could not receive kits, and therefore were unable to complete the self-enumeration. U.S. Navy administrative records were requested for those respondents and the data were transcribed onto blank SCRs by the NPC staff for data capture. Some submarines have two crews (Blue and Gold) and each of these crews received its own set of materials (Anderson and De Vos, 2010).

### **Marines on Navy Vessels**

A lesson learned from Census 2000 was to make a decision early in the process on whether or not Marines should be counted on U.S. Navy vessels. The team brought this issue up in the Census Joint Service Working Group (CJSWG) meeting on August 15, 2007. The Marine representative agreed that Marines should not be counted on U.S. Navy vessels. The Shipboard team used this information and provided specific instructions on Form D-49MIL, Shipboard Enumeration Military Vessels Self-Enumeration Quick Reference Guide that stated, “Do not instruct Marines to complete an enumeration package.” Kits were created and mailed using these instructions. As the time of enumeration drew near, the Marines were concerned that the Marines deployed on U.S. Navy vessels would be missed in the 2010 Census tabulations and requested that Marines on U.S. Navy vessels complete an SCR. On January 20, 2010, at the request of the Marines, the Census Bureau agreed to change this procedure and ask Marines to complete an SCR if they were on a U.S. Navy vessel. As a result of this change, the vessels that had already been mailed materials were mailed an addendum along with a revised Form D-49MIL, Shipboard Enumeration Military Vessels Self-Enumeration Quick Reference Guide. The kits that had not been sent were rekitting to include the revised Form D-49MIL, Shipboard Enumeration Military Vessels Self-Enumeration Quick Reference Guide (Anderson and De Vos, 2010).

### ***2.2.3 Enumerating Maritime Personnel***

#### **A. Enumeration Process**

The maritime population consisted of crews of U.S. flag commercial vessels. Each vessel assigned a Project Officer to serve as the primary contact and to coordinate enumeration activities on board that vessel (Anderson and De Vos, 2010).

A high level outline of the maritime enumeration process is below.

1. The Census Bureau requested a list of vessels, contact information, mailing address, and maximum crew capacity from the maritime agencies.
2. The NPC assembled operator kits and vessel kits containing enumeration and promotional materials and mailed them to the maritime operators via USPS Priority Mail.
3. Operators forwarded vessel kits to each vessel using enclosed pre-paid and pre-labeled flat rate mailing packages. Operators requested materials for additional vessels, if needed, using the Form D-34, Census Information for U.S. Flag Vessels, and a self-addressed stamped envelope.
4. The Project Officer on vessel immediately completed and returned Form D-46, Acknowledgement of Receipt of Shipboard Census Materials postcard and requested additional materials, if needed. Some vessels acknowledged via e-mail instead of mailing in the Form D-46, Acknowledgement of Receipt of Shipboard Census Materials.
5. Upon receiving the materials, the Project Officers were sworn to protect Title 13 materials.
6. The Project Officer displayed promotional materials and distributed enumeration materials to personnel.
7. Respondents completed a Form D-23, SCR – even if they had a UHE, or if someone else may have counted them at home. They placed the completed form in Form D-40, Confidentiality Envelope, sealed it, and returned it to the Project Officer.
8. The Project Officer ensured all forms were accounted for and mailed them back to the NPC in one or more USPS Priority Mail packages.

#### **B. Military Sealift Command and Ready Reserve Fleet**

Enumerating the Military Sealift Command and Ready Reserve Fleet caused a special problem during the 2010 Census. While having both military and civilian crews, Military Sealift Command and Ready Reserve Fleet vessels were part of the maritime population. There was an overlap in operating responsibilities of the Military Sealift Command vessels between MARAD and the Military Sealift Command. MARAD indicated they could better coordinate the enumeration for these vessels and the Census Bureau planned to use MARAD as the primary contact for the Military Sealift Command vessels. During the enumeration phase of the project, MARAD was not able to get the vessels enumerated. Therefore, the Census Bureau contacted the MSC directly to request assistance when there were issues with the vessels under the command of the MSC. By contacting the MSC, the Census Bureau was able to gain cooperation from the vessels (Anderson and De Vos, 2010).



### **2.2.4 Geocoding**

The NPC's Geography Branch geocoded both military and maritime vessels using Census Bureau tools (e.g. Search Utility Mapping Object (SUMO) and Geographic Acquis-Based Topological Real-Time Editing System (GATRES)). The following Internet resources were also utilized in the geocoding of the vessels (Anderson and De Vos, 2010):

- [www.maps.google.com/maps](http://www.maps.google.com/maps)
- [www.wikimapia.org](http://www.wikimapia.org)
- [www.bing.com/maps](http://www.bing.com/maps)
- [www.marinetraffic.com](http://www.marinetraffic.com)
- [www.shipspotting.com](http://www.shipspotting.com)
- [www.maersklinelimited.com](http://www.maersklinelimited.com)
- [www.msc.navy.mil](http://www.msc.navy.mil)
- [www.vesseltracker.com](http://www.vesseltracker.com)

#### **A. Military Geocoding**

The geocoding of the military vessels, which includes both U.S. Navy and U.S Coast Guard vessels, began with the assignment of a collection block for the military (homeports), using the blocks chosen for the homeport from Census 2000. In 2000, the collection blocks for 35 military homeports were selected for all of the vessels.

The 2000 Collection block list for the bases was then given to the GEO, to generate a comparable 2010 collection block. The list that was produced contained several one-to-many relationships, meaning one 2000 collection block was equal to many 2010 collection blocks.

Staff from the GEO and the DMD selected one 2010 collection block to geocode the military ships assigned by the military to that homeport. The only exception to this was San Diego, which was assigned five collection blocks, which covered three governmental units (GUs). The City of San Diego contained three collection blocks, of which, two were for Point Loma, which contained one collection block for U.S. Navy vessels located in Point Loma and one collection block was for U.S. Coast Guard vessels located in Point Loma. The governmental units of National City and Coronado were each comprised of one collection block (Anderson, and De Vos, 2010).

The U.S. Navy and U.S. Coast Guard provided the Census Bureau with a list of stateside vessels and their assigned homeport as of April 1, 2010. The DMD used the list provided by the U.S. Navy and U.S. Coast Guard and created a Navy Geocoding Vessel List and a Coast Guard Geocoding Vessel List, which contained the U.S. Navy or U.S. Coast Guard vessels names, their associated homeport and the collection block for the homeport. DMD sent this list to the NPC so that they could use this list to enter the vessel's geocode into ATAC.

The NPC captured the information for all military ships including the geocode. Instructions on how to capture the geocode were given to the NPC from the GEO on September 2009 in the document titled "Geocoding Maritime Vessels for Census 2010 Memorandum"

(Attachment N). The instructions to the NPC have them using the Form D-47, Census Location Report for Military Vessels and geocoding the individual military ships based upon the list of blocks supplied by the DMD.

### **A1. Geocoding of military vessels assigned to the San Diego homeport.**

San Diego is the homeport of 60 vessels for the U.S. Navy and the U.S. Coast Guard and they both share piers in the San Diego Bay. The San Diego Bay is similar to a parking lot that does not have reserved spaces. San Diego Bay covers three GUs, City of San Diego, National City and Coronado, and the vessels are not assigned to any particular GU. Vessels coming into the port are given a space based on availability and the depth as well as the draft of the vessel. The DMD, POP, GEO and NPC developed special procedures on where these vessels would be counted (De Vos, 2010a).

Vessels were assigned to the GU of the last pier where it was docked. If the vessel was docked on April 1, 2010, then the vessel was counted in the GU where the vessel was docked. If the vessel was out at sea on April 1, 2010, then the vessel was counted in the GU where it was last docked in the San Diego Bay. The locations of the vessels on April 1, 2010, were collected through numerous e-mails between the DMD and the U.S. Navy.

These procedures were an operational change from Census 2000 for San Diego vessels at sea on April 1, 2010. In 2000, if a vessel was docked on April 1, 2000 then the vessel was counted where it was docked; the same procedure was followed in 2010. If the vessel was out at sea, in 2000, then the vessel was counted in the City of San Diego as a default with the exception of aircraft carriers, which were counted in Coronado. In 2010, the procedures were changed so that crews of vessels out at sea on April 1, 2010 were counted at the dock from which they last sailed.

All military vessels assigned to a homeport in San Diego were placed into one of five collection blocks according to the geocoding rules specified for San Diego Bay. The DMD, GEO, and the CJSWG identified the five collection blocks below for the San Diego area:

- U.S. Navy - City of San Diego (block 27529) (Piers 1-5)
- U.S. Navy - Point Loma (which is part of City of San Diego) (block 24208)
- U.S. Navy - National City (block 27878) (Piers 6 – 14 and Mole Pier)
- U.S. Navy - Coronado (block 29625)
- U.S. Coast Guard - Point Loma (City of San Diego) (block 24855)

### **A2. Issues with Military Geocoding**

The collection blocks that were used in Census 2000 were updated and corrected prior to the data being processed, but the documentation was never updated. The 2010 Census used the same collection blocks as the Census 2000 documentation. However, the Census 2000 documentation did not contain the corrected collection blocks. This resulted in five military homeports being geocoded incorrectly for the 2010 Census: Norfolk, Virginia; Everett, Washington; Groton, Connecticut; Portsmouth, New Hampshire; and Pascagoula,

Mississippi. The miscoding of the military homeports was not found until the data were processed and released to the public. Once the problem was recognized, the Census Bureau released an errata stating that the five military homeports were geocoded incorrectly along with the affected collection blocks and the population associated with these collection blocks.

For future Censuses we recommend that detailed maps with the suggested collection block be reviewed and approved by a representative from the U.S. Navy and U.S. Coast Guard. By doing this, the Census Bureau would be able to confirm that the homeports are assigned to a collection block located on a military installation.

Another issue was found with the San Diego homeport. In selecting the collection block to represent vessels located in Coronado, the Census Bureau unknowingly selected a collection block that contained five tabulation blocks, one of which was located in the City of San Diego. The vessels that were located in Coronado ended up being tabulated in the one tabulation block located in the City of San Diego. The vessels were placed in the tabulation block located in the City of San Diego after they completed the 2010 Tabulation Block Geocoding hierarchy process. Since the vessels did not have a map spot or city-style address, the 2010 Tabulation Geocoding process had to use the last step in the geocoding hierarchy, which was, selecting the largest tabulation block within the collection block. In this case, the largest tabulation block within the collection block assigned to Coronado vessels, was the tabulation block located in the City of San Diego. As a result, vessels were incorrectly tabulated to the City of San Diego, when they should have been tabulated to Coronado. A post tabulation review of military vessels could have caught this error prior to the data being finalized. In the future, it is recommended that a quality control of the selection of tabulation blocks for military vessels be conducted prior to the data being finalized.

## **B. Maritime Geocoding**

The NPC Geography Branch researched addresses provided on Form D-47MAR, Census Location Report for Maritime Vessels to determine the appropriate geocode for maritime vessels. The Form D-47, Census Location Report for Maritime Vessels was sent back to the NPC check-in and DMD to obtain additional geography information if the NPC Geography Branch felt that the information provided did not yield a high confidence level in geocoding a vessel. If the NPC check-in or DMD was unable to acquire additional information then the vessel was flagged as ungeocodable and removed from further processing (Anderson and De Vos, 2010).

Vessels were geocoded based on the information that was provided on Form D-47MAR, Census Location Report for Maritime Vessels. The rules for where the vessels were on Census Day were as follows:

- The Census Bureau geocoded maritime U.S. flag vessels at the U.S. port where the ship is docked or moored on Census Day.
- If a vessel is sailing from a U.S. port to a U.S. port on Census Day, the Census Bureau geocoded the vessel at the port of departure.

- If a vessel is sailing from a Puerto Rico port to a U.S. port on Census Day, the Census Bureau geocoded the vessel at the Puerto Rico port. Conversely, if a vessel is sailing from a U.S. port to a Puerto Rico port, the Census Bureau geocoded the vessel at the U.S. port.
- Personnel aboard a vessel sailing from a U.S. port to an Island Area port or from an Island Area port to a U.S. port were not included in the 2010 Census. The Island Areas include American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands.

### **C. Foreign Port Vessels**

Maritime vessels were categorized as being a foreign vessel and were not included in the 2010 Census if they fell into any one of these categories:

- Docked in a foreign port
- Sailing from a foreign port to another foreign port
- Sailing from a U.S. port to a foreign port
- Sailing from a foreign port to a U.S. port

Military vessels, which were assigned to a foreign homeport were categorized as being overseas and were not included in the 2010 Census Shipboard Enumeration. Personnel on military vessels assigned to a foreign homeport were included in the federally affiliated overseas population (Anderson and De Vos, 2010).

### **Check-in of Foreign Vessels**

Vessels that met the criteria for being a foreign vessel were flagged as such in ATAC and the forms were physically segregated from the stateside forms, and were not sent to Decennial Response Integration System (DRIS) for data capture (Anderson and De Vos, 2010).

#### ***2.2.5 Residency Rules***

The Population Division (POP) provided the residency rules to determine inclusionary and exclusionary vessel criteria and to determine where to count the enumerated respondents. Military vessels were geocoded at their homeport of record, as provided by the designated military representatives. Since commercial vessels do not have a “homeport,” those mariners were counted either at the port where their vessel was berthed on April 1, 2010 or at their port of departure if the vessel was at sea on April 1, 2010 (Lamas, 2009).

Not captured in this operation were:

- Military vessels assigned to a foreign homeport. Personnel assigned to these vessels were counted in the federally affiliated overseas population.
- Maritime vessels not sailing under the U.S. flag (foreign-owned/operated).
- Maritime vessels that made daily trips out to sea and back – referred to as “day-trippers”.

- Maritime vessels berthed in, sailing from, and/or sailing to a foreign port.
- Vessels not in operation on April 1, 2010 – referred to as dry-docked.
- Vessels in port for repairs or that were scrapped.

### ***2.2.6 Usual Home Elsewhere (UHE)***

Shipboard personnel were given the option of entering an address for a residence where they stay when they are not on the vessel, which is considered a UHE or saying that they live on the vessel. This option was provided in question number 8 on the SCR, which reads, “Do you have a house, apartment, or mobile home where you usually stay when off duty?” If the respondent answered, “Yes” then the respondent was asked to provide the full address of the UHE. If the respondent said, “No” then the respondent specified that they live on the vessel. If an individual answered, “Yes” (has a UHE) for question 8, then the individual was eligible to be tabulated at their UHE address (Anderson and De Vos, 2010).

### ***2.2.7 Kit Assembly***

To provide a degree of standardization to the kit assembly for this operation, generic master and subkits were created with a pre-determined number of supplies, based on vessel type and maximum crew size consideration (see Attachment O for detailed kit contents). Each vessel received one master kit and at least one subkit. These master and subkits were pulled together for each vessel and prepared for shipment (Monaghan, 2009).

Master and Subkits were as follows:

- Kit 23 Military Vessel Master Kit
- Kit 23A Military Vessel Subkit A (enumeration materials for 600 respondents)
- Kit 23B Military Vessel Subkit B (enumeration materials for 100 respondents)
- Kit 23C Navy Letter of Support
- Kit 23D U.S. Coast Guard Letter of Support
- Kit 34 Operator Kit
- Kit 47 Maritime Vessel Master Kit
- Kit 47A Maritime Vessel Subkit A (enumeration materials for 50 respondents)
- Kit 47B Maritime Vessel Subkit B (enumeration materials for 10 respondents)

### ***2.2.8 Automation***

The ATAC system was developed and used by the NPC staff to check-in the materials received from the vessels. The universe for the 2010 Census Shipboard Enumeration Operation was loaded into ATAC, which allowed the user to update or revise addresses for the vessels. The NPC staff checked the vessel materials into ATAC. During the check-in process, ATAC electronically associated a Census ID for the vessel to each of the SCR IDs that were located on the Shipboard Census Reports that the vessel provided. This association was critical to be able to tabulate people to the correct geographic location. After check-in, ATAC allowed the NPC staff to enter geocode information for the vessel. ATAC allowed the user to assign a vessel a geocode or mark that the vessel was foreign or ungeocodable.

ATAC generated two files at the conclusion of the operation: a linkage file, which was provided to the DSPO and DRIS; and a GQ Add Table containing newly added vessels to the universe, which was provided to the DSPO and the GEO. The GQ Add Table contained all of the geographic and vessel information that was necessary for the vessel to be included in the 2010 Census tabulations. ATAC was also available for headquarters staff, but was restricted to read only. By having access to ATAC, Census headquarters staff were able to track the progress of the operation (Anderson and De Vos, 2010).

Below is a more detailed list of functions that ATAC provided for the 2010 Census Shipboard Enumeration Operation:

- Allowed the user to log the receipt of the Form D-46, Acknowledgement of Receipt of Shipboard Census Materials.
- Allowed the user to update address information for the vessel.
- Enter a geocode for a vessel or mark that the vessel was foreign or ungeocodable.
- Track materials that came back as undeliverable.
- Check-in the SCRs for the vessel.
- Link the SCRs to the vessel's Census ID.
- Provided a list of vessels that required more research on the enumeration or the address of the vessel.
- Allowed the user to enter new vessels into the universe.
- Provided a report that displayed the vessel name along with the number of SCRs that were checked-in for each vessel.
- Provided a report that displayed the vessel name, address information, and geocode.
- Provided a report that displayed the vessel name and address information for vessels that were ungeocodable.
- Provided a report that displayed a list of vessels where the vessel requested materials and the materials were not mailed within five days.
- Provided a report that displayed the address received and address expected for military vessels.
- Provided a report that displayed a list of vessels that submitted their Form D-46.
- Provided a report that displayed a list of vessels that had an undeliverable address.
- Generated a Census ID to the SCR ID linkage file.
- Generated a GQ Add Table.

### ***2.2.9 Decennial Response Integration System***

At the end of the 2010 Census Shipboard Enumeration Operation, the NPC delivered a linkage file, which contained an electronic linkage between the vessel's identification number and the associated SCR identification numbers to the Decennial Response Integration System (DRIS). The DRIS captured data (respondent information) from the completed SCRs and delivered data along with the associated vessel identification numbers to the DSPO.

### 3. Methodology

#### 3.1 Questions to be Answered

The following questions were selected and presented in the 2010 Shipboard Enumeration Assessment Study Plan:

1. What types of issues were encountered during the maritime vessel list development?

Methodology and Source: Data were pulled from Shipboard Team meeting notes, e-mails from the maritime agencies, and lessons learned.

2. What types of issues were encountered during the military vessel list development?

Methodology and Source: Data were pulled from Shipboard Team meeting notes, e-mails, and lessons learned.

3. Were there any issues in the printing of the Shipboard Enumeration materials?

Methodology and Source: Data were pulled from the 2010 Group Quarters print contract and lessons learned.

4. What types of issues were encountered during the shipping of enumeration kits/materials to the maritime vessel owner/operators?

Methodology and Source: Data were pulled from Shipboard Team meeting notes, e-mails, and lessons learned.

5. What types of issues were encountered during the shipping of enumeration kits/materials to the military vessels?

Methodology and Source: Data were pulled from Shipboard Team meeting notes, e-mails, and lessons learned.

6. How many maritime vessels were in the vessel universe by source?

Methodology and Source: Results were taken from the *Shipboard Tracking Report (Enumeration Tab)* and the *Address and Delete Tracker Report*. The data for the table were generated by subtracting the number in the *Address and Delete Tracker Report* from the Number of Vessels Materials Mailed To column in the *Shipboard Tracking Report (Enumeration Tab)*.

7. How many vessels were listed by the Military?

Methodology and Source: The initial workload counts were pulled from the *CGSHIPSANDBOATS* vessel list, which was provided by the U.S. Coast Guard, and the *Final Navy Vessel List 100402*, which was provided by the U.S. Navy. At the U.S. Coast

Guard suggestion, the Census Bureau only enumerated the larger Coast Guard vessels, which included the high endurance cutters, medium endurance cutters (270, 210 and mature class), and icebreakers. The military vessels “adds” were taken from the *Address and Delete Tracker Report*.

8. How many vessels did not return enumeration materials?

Methodology and Source: Results were taken from the *Shipboard Tracking Report (Enumeration Tab)* for data pertaining to the number of vessels that did not return any materials and vessels that only returned a Form D-46, Acknowledgement of Receipt of Shipboard Census Materials. Results for the number of vessels that came back as undeliverable were taken from the “UAA” tab on the *Address List and Delete Tracker Report*.

9. What types of issues were encountered in determining if a vessel was considered in-scope or out-of-scope?

Methodology and Source: For maritime vessels, owner/operators e-mailed or called stating that their vessels were not in-scope (dry docked, day tripper). This information was then entered on the *Vessel Address and Delete Tracker* spreadsheet. Information concerning the scope of the vessels was pulled from the updated *Vessel Address and Delete Tracker*.

Data concerning the scope of military vessels were pulled from the Shipboard Team meeting minutes and from the Navy Special Procedures document. The Navy Special Procedures document provided a list of Navy vessels that were considered foreign vessels, which were out-of-scope. The Shipboard Team meeting minutes provided updates on Navy vessels that were either decommissioned, scrapped, or were not commissioned at the time of April 1, 2010.

10. What was the number of ungeocodable maritime vessels due to insufficient address information on the Form D-47, Census Location Report for Maritime Vessels?

Methodology and Source: The number of ungeocodable maritime vessels was pulled from the *Shipboard Tracking Report (Processing Tab)*.

11. How many vessels were coded as being a foreign vessel?

Methodology and Source: Results were taken from the *Shipboard Tracking Report (Processing Tab)* and *Shipboard Tracking Report (Enumeration Tab)*.

12. How many maritime vessels were not processed due to non-receipt of the Form D-47, Census Location Report for Maritime Vessels?

Methodology and Source: The NPC maintained the *Vessels Missing D-47 Location Report*, which listed the vessels that submitted SCRs, but did not submit a Form D-47 Location Report. Vessels were pulled from this report and linked to their agency.



13. What were the differences between the tabulation and enumeration count of persons on vessels?

Methodology and Source: The official count for maritime and military vessels was produced from data in the Census Edited File (CEF). Only those records in the CEF with a GQ Type Code of 602 (Military Vessel) or 900 (Maritime Vessel) were extracted to produce the official count. The enumeration count for maritime and military vessels was produced from data in the Decennial Response File (DRF). The records extracted from the DRF were those with a GQ Type Code of 602 or 900 and a form type value of 791 (SCR – English) or 792 (SCR – Puerto Rico).

14. What types of issues were encountered during the receipt of enumeration materials from military vessels?

Methodology and Source: Data were pulled from Shipboard Team meeting notes, e-mails from representatives of the U.S. Navy and U.S. Coast Guard, and lessons learned.

15. What types of issues were encountered when gathering pier location for the military vessels homeported in San Diego?

Methodology and Source: Data were pulled from Shipboard Team meeting notes, e-mails, and lessons learned.

16. How many vessels submitted administrative records compared to those vessels that mailed in their materials?

Methodology and Source: A list of vessels that submitted administrative data was maintained in the *Vessel Address and Delete Tracker* spreadsheet on the “D-47 No SCR” tab. The total number of vessels that submitted administrative records or just the vessel count was pulled from this tab. This total was then subtracted from the total number of vessels that were checked-in to get the number of vessels that mailed in SCRs.

17. What was the number of vessels enumerated?

Methodology and Source: Results were taken from the *Shipboard Tracking Report (Enumeration Tab)* and the *Geocoding Summary Report*, which was generated by ATAC. The *Shipboard Tracking Report* is a summary of data provided by the *D-47 Check-In Summary Report*, the *Enumeration Tab* on the individual tracking reports (*Lake Carriers Vessel Tracking Report*, *MARAD Vessel Tracking Report*, *Military Sealift Command Vessel Tracking Report*, *Tuna Vessel Tracking Report*, *NOAA Vessel Tracking Report*, *Navy Vessel Tracking Report*, and *USCG Vessel Tracking Report*), and the *Address and Delete Tracker Report*, which contains four tabs, *Vessel Deletes*, *Vessel Adds*, *UAAs* and *D-47 No SCRs*.

18. What was the number of vessels processed?

Methodology and Source: The vessel count by type was produced from data in the CEF. Only those records from the United States and Puerto Rico with a Group Quarters Type

Code of 602 (military vessel) or 900 (maritime vessel) were included in the vessel count. Given that multiple person records existed for most vessels, only one record for each vessel was included in the vessel count.

19. What was the population count?

**Methodology and Source:** The population count by type was obtained from data in the CEF. The person records in the CEF that had a GQ Type Code of 602 (military vessel) or 900 (maritime vessel) were included in the population count for vessels.

20. What happened to 1,071 vessels in the vessel universe?

**Methodology and Source:** Results were taken from the *Shipboard Tracking Report (Enumeration Tab)* and the *Geocoding Summary Report*, which was generated by ATAC. The *Shipboard Tracking Report* is a summary of data provided by the *D-47 Check-In Summary Report*, the *Enumeration Tab* on the individual tracking reports (*Lake Carriers Vessel Tracking Report*, *MARAD Vessel Tracking Report*, *Military Sealift Command Vessel Tracking Report*, *Tuna Vessel Tracking Report*, *NOAA Vessel Tracking Report*, *Navy Vessel Tracking Report*, and *USCG Vessel Tracking Report*), and the *Address and Delete Tracker Report*, which contains four tabs, *Vessel Deletes*, *Vessel Adds*, *UAAs* and *D-47 No SCRs*.

21. How many questionnaires reported a usual home elsewhere?

**Methodology and Source:** Data from the DRF were used to determine the number of questionnaires that reported a usual residence elsewhere. The variable PLASTAY\_YES on the DRF with a value of “1” indicated that the person reported having a usual residence elsewhere. Those person records with PLASTAY\_YES = 1 and Form Type = 791 (SCR – English) or 792 (SCR – Puerto Rico) and GQ Type Code = 602 or 900 were extracted to produce this count. Conversely, the count of those questionnaires that did not indicate a usual residence elsewhere was also provided by looking at those records where PLASTAY\_YES = 0.

22. Were there notable differences for the usual home elsewhere information for vessels that submitted administrative records compared to those vessels that mailed in their materials?

**Methodology and Source:** DMD provided a list of vessels that submitted their materials through administrative records. A flag indicator was set using Statistical Analysis System (SAS) software to identify all records belonging to those vessels where NPC completed SCRs through the use of administrative records. This administrative record indicator flag was set to “Y” or “N” for all records belonging to vessels to indicate whether or not NPC completed SCRs using administrative records. A cross tabulation of the administrative record indicator flag and the PLASTAY\_YES variable (as described above) was performed to obtain the percent of UHE addresses by data collection method, that is, vessels that submitted administrative records as opposed to those vessels that mailed in their completed SCRs.

23. What was the percent of stateside usual home elsewhere addresses provided for vessels geocoded as being foreign compared to vessels geocoded as being stateside?

Methodology and Source: All vessels that were checked in and coded as a foreign vessel were set aside for analysis. DMD reviewed these materials, counted the number of SCRs for each of the vessels and then counted the number of SCRs that provided a stateside address in the UHE section of the SCR. These numbers were then entered into the *Foreign Vessel Residency Rule Analysis – Non Title 13* spreadsheet. The numbers provided in this report were taken from this spreadsheet.

24. Were there any language issues?

Methodology and Source: Data were pulled from the lessons learned.

25. Did the 2010 Census Shipboard Enumeration Operation meet the scheduled deadlines?

Methodology and Source: The Master Activity Schedule was used to answer this question. The activities on the Master Activity Schedule were grouped into two categories, activities that were completed less than one week late or activities that were completed after being at least one week late.

26. Did the 2010 Census Shipboard Enumeration Operation come under or over budget?

Methodology and Source: Data were pulled from e-mails and Shipboard Team meeting minutes.

27. What was the number of staff assigned to the project?

Methodology and Source: Data were pulled from the check-in training manual and Shipboard Team meeting minutes.

### **3.2 Methods**

All vessels in the fifty states, the District of Columbia, and Puerto Rico are included in the summary statistics in this evaluation. Most of the questions were answered using data from the DRF, CEF and the CUF, vessel tracking reports, and the *Shipboard Tracking Report*.

The final population counts, by vessel type category, were based on the count of persons in vessels after the Non-ID process. Respondents who reported a “valid” UHE on the SCR were removed from the vessel count. For the most part, results are shown as one combined total for the United States and Puerto Rico.

Questions were answered using data from the following sources:

- 2010 Census Shipboard Enumeration Lessons Learned - - Provides documentation about project management, data quality, and data accuracy regarding successes, issues, and recommended continued practices or corrective actions based on lessons learned for the 2010 Census Shipboard Enumeration Operation for the next decennial census in 2020.
- 2010 Vessel Debriefings - - Provides documentation of debriefings conducted with the NPC staff, Census Bureau headquarters staff, and the CJSWG, which is operated by the Department of Defense.
- ATAC Reports -- Provides the population count for each vessel, along with the date in which the vessel was checked-in along with the vessel's address.
- Census Edited File (CEF) - - Provides the final population and status for vessels.
- Census Unedited File (CUF) - - Provides total population counts and response data for persons counted on vessels prior to editing.
- Decennial Response File (DRF) -- Provides the person and vessel records from the collection of respondent data.
- NPC Documentation of Foreign Vessels - - Provides information that was not collected in ATAC for foreign vessels that were categorized as being out-of-scope.
- Vessel Tracking Reports - - Spreadsheets maintained by DMD that tracked the enumeration results for each of the agencies that provided vessel lists. These lists also tracked the vessel "adds" and vessel "deletes", along with the reason why the vessel was deleted from enumeration universe.
- Shipboard Tracking Report – This report provides a summary of all of the *Vessel Tracking Reports* and the *Address and Delete Tracker Report*.

### **3.3 Quality Assurance Procedures**

Census Bureau standards and quality process procedures were applied throughout the creation of this report. The Census Bureau standards were used to determine evaluation methods, create specifications for project procedures and software, design and review computer systems, develop clerical and computer procedures, analyze data, and to prepare this report.

## **4. Limitations**

Refer to page 34 for limitations on the analysis of SCR UHE reported data.

## **5. Results**

The following questions include all sub questions as presented in the study plan followed by data that answer each question.

## **5.1 What types of issues were encountered during the maritime vessel list development?**

There were three major issues with the development of the maritime vessel lists. The first issue was the duplication of vessels across vessel lists. The second major issue was the lack of information on some of the vessel lists, for instance maximum crew size and contact information. The last major issue was the timing of the receipt of MARAD's vessel list.

The Commercial Fisheries Entry Commission and National Marine Fisheries Service had very similar vessel lists. The DMD combined the two lists into one list and removed the duplicates. There was also duplication between the Military Sealift Command and the MARAD vessel lists. The DMD removed the duplicated vessels from the Military Sealift Command vessel list since the MARAD list provided owner/operators. These vessel lists required additional processing steps for mailout but were all beneficial to the operation and should be used in future censuses.

Lack of information was a major issue in the development of the vessel lists and was resolved through phone calls and research on the Internet. The Commercial Fisheries Entry Commission and National Marine Fisheries Service were unable to provide the maximum crew size for their vessels. The NPC and DMD called each of the owner/operators to obtain the maximum crew so that the correct vessel kit could be mailed to the owner/operators. In the instances where there was an address, but no phone number for the owner/operator, the owner/operator was sent four vessel kits, which contained ten SCRs each. There were also instances where the Commercial Fisheries Entry Commission and National Marine Fisheries Service vessel list did not contain address information. The NPC and DMD called the owner/operator and asked for an address. If the NPC and DMD were unable to contact the owner/operator or if the vessel list did not provide contact information, then Internet research was conducted. Through the use of phone calls and the Internet, contact information and/or address information was gained for some of these vessels, but there was a low success rate in gathering information for these vessels on the Internet. Vessels were removed from the vessel list if the necessary address information was not obtained.

The Census Bureau sent a vessel request letter to MARAD asking that they provide an initial vessel list by July 6, 2009 and then an updated list by January 5, 2010 (Vitrano, 2009a). The initial vessel list was to help in the development of our printing and kit specifications, specifically, how much printing was needed and how many kits should be made. The initial vessel list was never received from MARAD, thus estimates using data from Census 2000 were used for our printing and kit specifications. The official vessel list was received from MARAD on January 25, 2010. Once the MARAD vessel list was acquired, the kit specifications were finalized because the complete list of vessels was obtained. The MARAD list provided two lists; one list contained the vessel names and their associated owner/operator and another list contained the owner/operators contact information. The NPC and DMD verified the mailing address with each of the owner/operators since some contacts were listed under multiple companies. The vessel lists were then merged with the revised owner/operator list.

The issues experienced during the maritime vessel list development added more stress to the process, but the Shipboard Team was able to work around those issues and ship the materials to the owner/operators on time. The shipping deadline was met by redesigning the kit assembly from a vessel specific kit to a generic kit, and by preparing and mailing shipments to the vessels that were on the vessel lists that the NPC received earlier. There was not a lag time between the start of the preparation of materials and the shipping of materials, although the Shipboard Team would have preferred to mail to the MARAD owner/operators sooner since they were larger companies and had more vessels.

## **5.2 What types of issues were encountered during the military vessel list development?**

We received the vessel lists from the U.S. Navy and the U.S. Coast Guard in a timely manner but the vessel list that we received from the U.S. Navy was outdated. The Census Bureau had to make additional mailings to the correct vessel address.

The initial list of U.S. Navy vessels was received on July 17, 2009. An updated list was received on October 13, 2009, another one on December 14, 2009, and the final U.S. Navy vessel list on April 2, 2010. The initial U.S. Coast Guard vessel list was received on June 29, 2009. The U.S. Coast Guard stated on April 1, 2010 that their vessel list was unchanged since the initial list was provided.

## **5.3 Were there any issues in the printing of the Shipboard Enumeration materials?**

No issues were encountered during the printing of the Shipboard Enumeration materials. There were 269,000 SCRs (U.S. Census Bureau, 2009) printed for the first print contract, which gave the operation enough SCRs to create our original number of vessel kits needed. A second print contract was submitted to cover the SCRs that were needed for the additional mailings due to the outdated addresses that were received. The remaining 2010 Census Shipboard Enumeration Operation materials, such as the Form D-47, Census Location Report, the Form D-46, Acknowledgement of Receipt of Shipboard Census Materials and the D-48(L), Introduction Letter, were printed at the NPC without problems.

## **5.4 What types of issues were encountered during the shipping of enumeration kits/materials to the maritime vessel owner/operators?**

There were no surprises pertaining to the shipping of materials to the vessel owner/operators. A number of undeliverable packages were received back from vessels, but not as many as expected. In most cases, the NPC or DMD were able to contact the vessel's owner/operator and obtain an updated address. If the NPC or DMD were unable to contact the vessel's owner/operator, then the vessel was researched through the use of the Internet. Updated addresses were obtained for all but 25 vessels.

The biggest issue with the shipping of materials to the maritime vessels was the amount of materials that were sent. The most common complaint received from maritime and military vessels was that too many materials were sent. Vessel owners said that it was a waste of taxpayer money to send the extra enumeration materials. In addition, vessel owners were unsure of what to do with the unused materials. The Form D-49, Self-Enumeration Quick Reference Guide stated that extra materials should be destroyed and not to send the materials back to the Census (to save money for the cost of shipping the materials back).

Forty SCRs were shipped, for the vessels where the maximum crew size was unknown, and in the future, the number of SCRs sent should be lowered. The number of SCRs sent was matched to the vessel's maximum crew size plus an additional ten percent. So if a vessel had a maximum crew size of 100, then 110 SCRs were sent to the vessel. This procedure was planned because it would cost more to send another shipment than it does to send extra materials to the vessel. Our goal was to make sure that the vessels had all of the necessary materials to conduct their enumeration prior to Census Day. For the 2020 Census, the Shipboard Team recommends sending enough materials for the maximum crew size instead of sending enough for the maximum crew size and an additional ten percent.

### **5.5 What types of issues were encountered during the shipping of enumeration kits/materials to the military vessels?**

The biggest issues encountered during the shipping of enumeration kits/materials to the military vessels were: mailing materials to vessels assigned to a foreign homeport; re-mailing materials due to outdated addresses; and vessels missing the reply materials (reply materials included packing tape and pre-paid USPS Priority Mail boxes or envelopes).

A complete new set of materials were re-mailed to 31 U.S. Navy vessels, which was a much higher number than expected. It was later realized that the U.S. Navy mistakenly sent an older vessel address list than intended. This resulted in the high number of vessels not receiving their initial set of materials. Having to re-mail the materials to the vessels cost additional money, approximately \$78 per vessel, and most importantly, time. Three U.S. Navy vessels did not receive their first set of materials until after May 19, 2010, which was after the May 15, 2010 Census Bureau deadline for sending completed materials back.

During the planning process, it was decided to mail materials to the vessels assigned to a foreign homeport in case their homeport changed between the initial mailing and Census Day. The vessels assigned to a foreign homeport should have been notified after April 1, 2010, that they did not need to complete their materials. This was overlooked, and completed materials were received from vessels assigned to foreign homeports. An e-mail was sent out on May 18, 2010, to the remaining vessels assigned to a foreign homeport that they did not need to complete the 2010 Census materials and that the materials should be destroyed. In the future, it is recommended that materials should not be sent to vessels assigned to a foreign homeport and that it would be better to accept the risk that one of those vessels has its homeport changed to a stateside homeport. This would cut down on shipping costs and would also save the vessels assigned to foreign homeports the trouble of filling out Census forms that would not be used.

Twelve U.S. Navy vessels reported that they did not receive the return materials that were included in the vessel kits. Return materials were resent to these vessels. The return materials were packed separately from the rest of the vessel kit and could have easily been misplaced. In the future, it is recommended that the return materials be labeled with big fluorescent stickers indicating that the materials are for the Census Bureau.

## 5.6 How many maritime vessels were in the vessel universe by source?

Each maritime agency was asked to provide a list of U.S. owned and operated American flagged vessels used for commercial and non-combatant government purposes. Table 1 provides the initial number of vessels provided by each maritime agency and the number of vessels added during the operation.

**Table 1 Maritime Vessels in the Vessel Universe by Source**

Maritime Agency	Number of Vessels on Initial List	Number of Vessels Added	Total Number of Vessels	Percent of Vessels on Final List
Maritime Administration	260	2	262	34.07%
American Tuna Boat Association	38	0	38	4.94%
Lake Carriers Association	13	0	13	1.69%
Commercial Fisheries Entry Commission and National Marine Fisheries Service*	263	7	270	35.11%
National Oceanic and Atmospheric Administration	19	0	19	2.47%
Military Sealift Command	106	2	108	14.04%
Other Maritime	0	59	59	7.67%
<b>TOTAL</b>	<b>699</b>	<b>70</b>	<b>769</b>	<b>99.9%</b>

Source: *Shipboard Tracking Report (Enumeration Tab)* (De Vos, 2012) and the *Address List Updates and Delete Tracker Report (Vessels Adds Tab)* (De Vos, 2011a)

\*Commercial Fisheries Entry Commission and National Marine Fisheries Service counts were combined since their lists had duplicate vessels.

## 5.7 How many vessels were listed by the Military?

The U.S. Navy and U.S. Coast Guard were asked to provide a list of vessels assigned to a stateside homeport. Table 2 provides the initial number of vessels provided by the U.S. Navy and U.S. Coast Guard along with the number of vessels added during the operation. The U.S. Navy provided a list of 250 vessels. The U.S. Coast Guard provided a list of 248 vessels, but at the suggestion of the U.S. Coast Guard, the Census Bureau did not enumerate 203 of the smaller vessels since the U.S. Coast Guard stated that no one would live on these vessels. The Census Bureau only enumerated the 45 larger Coast Guard vessels, which included the high endurance cutters, medium endurance cutters, and icebreakers.



**Table 2 Number of Military Vessels in the Vessel Universe**

Type of Military Vessel	Initial Number of Vessels	Number of Vessels Added	Total Number of Vessels	Percent of Vessels Submitted by Military Branch
U.S. Navy	250	7	257	85.10%
U.S. Coast Guard	45	0	45	14.90%
<b>TOTAL</b>	<b>295</b>	<b>7</b>	<b>302</b>	<b>100.0%</b>

Source: *Final Navy Vessel List 100402* (U.S. Navy, 2010) and *CGSHIPSANDBOATS* (U.S. Coast Guard, 2009)

## 5.8 How many vessels did not return enumeration materials?

The counts in Table 3 below only include those vessels that did not respond to our inquiries. Vessels that did not complete and return materials but notified the Census Bureau via e-mail or phone calls stating that their vessel was out-of-scope are not included in the table below.

Two reminder letters were sent to the nonresponding vessels. Form D-35(L), First Reminder Letter was mailed on April 19, 2010 and Form D-36(L), Second Reminder Letter was mailed on May 19, 2010. On June 1, 2010, the NPC and DMD began to e-mail and call the remaining owner/operators who had not responded. The NPC and the DMD continued to make these phone calls and send e-mails to the maritime vessels until June 14, 2010.

The NPC and DMD called the owner/operators for vessels that had materials come back as undeliverable. If a phone number was unavailable or the NPC and DMD were unable to contact the owner/operator, then the NPC and DMD researched the vessel on the Internet. None of the cases that came back as undeliverable were resolved through Internet research and phone calls.

There was a total of 293 (27.4 percent) of the 1,071 vessels in the universe that did not return materials, including 62 vessels that were missing only the Form D-47, Census Location Report. Although the Shipboard Team attempted to obtain information for the 62 vessels based on the name of the vessel if recorded on SCRs, these vessels were ungeocodable due to an incomplete Form D-47, Census Location Report. The Census Bureau has included these vessels in the number of vessels that did not return completed materials and these vessels were not considered enumerated. In order for a vessel to be considered complete and enumerated, a completed Form D-47, Census Location Report must contain geographic data and the Form D-47, Census Location Report must be accompanied by at least one SCR.

**Table 3 Number of Vessels that Did Not Return Completed Materials**

Military or Maritime Agency	Number of Vessels that Did Not Return Any Materials	Number of Vessels that Only Returned the Form D-46	Number of Vessels that Did Not Return a Form D-47	Number of Mailings that Came Back as Undeliverable	Total Number of Vessels that Did Not Return Completed Materials
U.S. Navy	0	0	0	0	0
U.S. Coast Guard	0	0	0	0	0
Maritime Administration	50	15	22	13	100
American Tuna Boat Association	3	0	1	0	4
Lake Carriers Association	0	0	0	0	0
Commercial Fisheries Entry Commission and National Marine Fisheries Service*	86	12	18	4	120
National Oceanic and Atmospheric Administration	0	0	0	0	0
Military Sealift Command	21	13	13	8	55
Other Maritime	6	0	8	0	14
<b>TOTAL</b>	<b>166</b>	<b>40</b>	<b>62</b>	<b>25</b>	<b>293</b>

Source: *Shipboard Tracking Report (Enumeration Tab)* (De Vos, 2012) and the *Address List and Delete Tracker Report (UAA Tab)* (De Vos, 2011a).

\*Commercial Fisheries Entry Commission and National Marine Fisheries Service counts were combined since their lists had duplicate vessels.

### **5.9 What types of issues were encountered in determining if a vessel was considered in-scope or out-of-scope?**

The residency rules for a maritime vessel were well defined, and the Shipboard Team did not have any issues in determining if a maritime vessel was considered to be in scope. The Shipboard Team did, however, run into some issues in determining if some of the U.S. Navy vessels were in-scope.

A number of maritime owners/operators contacted the Census Bureau and provided information that excluded their vessel from the enumeration population. Those vessels were considered out-of-scope (decommissioned, day-tripper, dry docked for repairs, etc.) and removed from the universe and any further processing. The numbers of vessels considered out-of-scope can be found in section 2.2.1.C.

Vessels materials were received from three U.S. Navy vessels that were not on the U.S. Navy vessel list. The vessels were researched on the Internet, and it was found that two of the vessels were not commissioned by April 1, 2010, and one of the two vessels was still in the construction stage. Since the U.S. Navy did not own these vessels on April 1, 2010, these vessels were out-of-scope for the 2010 Census Shipboard Enumeration Operation.

One U.S. Navy vessel was commissioned shortly before April 1, 2010 and was assigned to the San Diego homeport. However, there were concerns on where to geocode the vessel since it was assigned to the San Diego homeport, but had never docked in San Diego. Our residency rules for the San Diego Bay were to count the vessel where it was docked on April 1, 2010. If a vessel was in port in San Diego or if the vessel was out at sea on April 1, 2010, then the vessel was counted at the San Diego pier from where the vessel departed. This vessel did not fit into any of our residency rules for San Diego since it had never been to the San Diego Bay. Since the U.S. Navy said that the vessel type is usually docked in the piers located in the City of San Diego, this vessel was geocoded to the City of San Diego.

### **5.10 What was the number of ungecodable maritime vessels due to insufficient address information on the Form D-47, Census Location Report for Maritime Vessels?**

GEO needed to have the name of the pier or designated anchorage, street name, city, state, and ZIP code entered on the Form D-47, Census Location Report for Maritime Vessels, in order for a vessel to be geocoded. Phone calls were made to each of the vessels that did not contain the necessary geocoding information. The NPC and DMD staff were able to resolve missing information for all of the vessels that were contacted. The NPC and DMD staff were unable to get in contact with the 10 vessels in the table below and as a result, these 10 vessels remained ungecodable.

**Table 4 Number of Ungecodable Vessels Due to Insufficient Information**

	Number of Ungecodable Vessels Due to Insufficient Address Information
Maritime Vessels	10
<b>TOTAL</b>	<b>10</b>

Source: *Shipboard Tracking Report (Processing Tab)* (De Vos, 2012)

### **5.11 How many vessels were coded as being a foreign vessel?**

Many vessel owners and operators contacted either the NPC or DMD through e-mails or phone calls stating that their vessel sails in foreign waters. For example, one Tuna Fleet operator called the NPC and said that all of their vessels were located in the South Pacific and that their vessels rarely come stateside. In these cases, the NPC or DMD did not receive any materials from the vessels, so the vessels were not checked-in to ATAC, and were removed from the Shipboard Enumeration universe. If the NPC received the phone call or e-mail, they forwarded the information to the DMD, and the DMD coded the vessels as being foreign on the Excel spreadsheet *Address and Delete Tracker Report (Vessel Delete Tab)*. Vessels on the *Address and Delete Tracker Report (Vessel Delete Tab)* were counted in the “Enumeration” column of the table below. In most cases, the NPC received materials from the vessels including a D-47, Census Location Report and SCRs. Vessels were coded as being a foreign vessel when they entered a foreign port for their port of departure, port of destination, or port currently docked. These cases were checked-in to ATAC and coded as being foreign. These vessels were counted in the “Post Enumeration” column in the table

below. Since foreign vessels were considered out-of-scope for the 2010 Census, ATAC did not include foreign-coded vessels on the GQ Add Table or on the SCR Linkage file that was sent to the DRIS and DSPO.

The American Tuna Boat Association provided the largest percentage of vessels coded as a foreign vessel with 81.6 percent (31 out of 38 vessels) of its vessels being foreign. The Lake Carriers Association, which consists of vessels operating in the Great Lakes, had zero vessels coded as foreign as well as the Commercial Fisheries Entry Commission and National Marine Fisheries Service, which both operate in the North Pacific, which covers areas of Washington and Alaska.

Eighty-nine vessels were checked-in to the ATAC system as a completed vessel, but were later removed from either the NPC or Census Bureau Headquarters processing because they could not be geocoded to a 2010 Census collection block. These vessels were considered out-of-scope for the 2010 Census.

**Table 5 Number of Vessels Coded as Being a Foreign Vessel**

Military or Maritime Agency	Number of Vessels Assigned to Foreign Port During Enumeration	Number of Vessels Assigned to Foreign Port Post Enumeration	Total Number of Vessels Assigned to a Foreign Port	Total Number of Vessels for Agency
U.S. Navy	18	16	34 (13.23%)	257
U.S. Coast Guard	0	0	0 (0.00%)	45
Maritime Administration	16	39	55 (21.00%)	262
American Tuna Boat Association	28	3	31 (81.58%)	38
Lake Carriers Association	0	0	0 (0.0%)	13
Commercial Fisheries Entry Commission and National Marine Fisheries Service*	0	0	0 (0.0%)	270
National Oceanic and Atmospheric Administration	0	4	4 (2.11%)	19
Military Sealift Command	4	27	31 (28.70%)	108
Other Maritime	4	0	4 (6.78%)	59
<b>TOTAL</b>	<b>70</b>	<b>89</b>	<b>159 (14.85%)</b>	<b>1,071</b>

Source: *Shipboard Tracking Report (Enumeration Tab, Processing and HQ Processing Tab)* (De Vos, 2012).

\*Commercial Fisheries Entry Commission and National Marine Fisheries Service counts were combined since their lists had duplicate vessels.

## 5.12 How many maritime vessels were not processed due to non-receipt of the Form D-47, Census Location report for Maritime Vessels?

Some vessels mailed in completed SCRs but did not send a completed Form D-47, Census Location Report for Maritime Vessels. A vessel is not considered complete until a Form D-47, Census Location Report for Maritime Vessels is completed. The Form D-47, Census Location Report for Maritime Vessels is necessary to geocode the vessels; without this completed form the Census Bureau was unable to place the vessels' counts at specific locations. When NPC received completed SCRs without a completed Form D-47, Census Location Report for Maritime Vessels, the NPC and DMD staff called and e-mailed, when

possible, each of the vessels that sent in SCRs, but did not send in a completed Form D-47, Census Location Report for Maritime Vessels. Between the NPC and DMD, half of the vessels that originally did not provide a Form D-47, Census Location Report for Maritime Vessels were resolved through phone calls and e-mails. In some instances, SCRs were received from vessels that were not on any of our vessel lists and also did not send a completed Form D-47, Census Location Report for Maritime Vessels. In these cases, research was conducted on the vessel through the use of the Internet to try to find contact information for these vessels. The Census Bureau was unable to resolve any of the vessels that did not send in their completed Form D-47, Census Location Reports for Maritime Vessels and were also not on any of our vessel lists. The NPC and DMD were unable to get in contact or did not receive responses from the 62 vessels in the table below. These vessels were considered incomplete and were not included in the vessel tabulations.

**Table 6 Number of Maritime Vessels Not Processed Due to Missing Form D-47, Census Location Report for Maritime Vessels**

Maritime Agency	Number of Vessels that Sent in SCRs, but Did Not Submit a Form D-47
Maritime Administration	22
American Tuna Boat Association	1
Lake Carriers Association	0
Commercial Fisheries Entry Commission and National Marine Fisheries Service*	18
National Oceanic and Atmospheric Administration	0
Military Sealift Command	13
Unknown	8
<b>TOTAL</b>	<b>62</b>

Source: *Vessels Missing D-47 Location Report* (De Vos, 2011c)

\*Commercial Fisheries Entry Commission and National Marine Fisheries Service counts were combined since their lists had duplicate vessels.

### **5.13 What were the differences between the tabulation and enumeration count of persons on vessels?**

Of the 84,217 SCRs data captured for military vessels, well over half (49,473) were included in the final Census counts. A similar result is seen with the maritime vessels in that well over half (2,391) of the total SCRs (4,262) were included in the final Census vessel counts. The overall difference between the tabulated and enumeration counts for maritime and military vessels was 36,615 (41.4 percent). A difference in the tabulated and enumerated count was expected based on past history. As seen in previous censuses<sup>3</sup>, a high number of respondents who work on military and maritime vessels have an on-shore address. Respondents who report a UHE address on a SCR were removed from the enumerated Shipboard count and tabulated at the UHE address.

<sup>3</sup> Findings came from the “History of the Census 2000 Military-Maritime Vessel Enumeration”, which was written by Linda Ogle (2000). The document stated that “an average of 60% of the persons aboard military vessels had a UHE and 40% were enumerated as the population of the vessel” (page 28).

**Table 7 Differences between Official Count and Enumeration Count**

Vessel Type	Number of SCRs Counted (official count) in the Census	Number of SCRs (enumeration count) Data Captured	Difference between Official and Enumeration Counts
Maritime	2,391	4,262	1,871
Military	49,473	84,217	34,744
<b>TOTAL</b>	<b>51,864</b>	<b>88,479</b>	<b>36,615</b>

Source: 2010 DRF and CEF (Williams, Andre 2011)

### **5.14 What types of issues were encountered during the receipt of enumeration materials from military vessels?**

The biggest issue encountered during the receipt of enumeration materials from military vessels was that materials were received after the scheduled receipt date. The date that was asked for the vessels to return the materials was May 14, 2010. The Shipboard Team was not expecting to receive all of the vessel materials at that time, but had planned on receiving all of the materials by June 14, 2010. On June 14, 2010, 38 vessels, 21 U.S. Navy and 17 U.S. Coast Guard, had not returned their vessel materials. Each week during the operation, the DMD provided a vessel list to the sworn-in representatives of the U.S. Navy and U.S. Coast Guard, which displayed the status of the vessels, completed or not completed. After June 14, 2010, the DMD began to provide real time updates when the NPC received materials from the vessels. The U.S. Navy in turn provided the DMD with updates that they received from the vessels where the vessel stated that they mailed their materials. In some instances, the vessel had already mailed their materials, but it took over a month for them to be received at the NPC. On June 21, 2010, the DMD gave the U.S. Navy and the U.S. Coast Guard vessels the option of providing administrative records for the remaining nonresponding vessels. All of the remaining nonresponding U.S. Coast Guard vessels opted to use the option of providing administrative records, while eight of the remaining U.S. Navy vessels opted to use the option of providing administrative records. The DMD received many updates from the vessels stating that they would provide the materials within the next week, but it usually took longer. The DSPO and DRIS accepted the scheduled end-of-operation file delivery on July 22, 2010 even though the files were scheduled to be delivered on June 21, 2010. The planned procedure was to deliver only one set of file deliveries, but one U.S. Navy vessel was still missing materials on July 22, 2010. The DSPO and DRIS agreed that they would accept an additional file delivery, but warned that the longer it took for them to receive the last file, the greater the risk of the vessel not being included in the counts. The materials for the last U.S. Navy vessel were received on July 28, 2010 and the NPC provided the last set of file deliveries to the DSPO and DRIS that day.

As a last resort, the 2010 Census Shipboard Enumeration Operation procedures allowed the option of only providing a vessel count. This option was only available after the exhaustion of all other options. For the 2010 Census, a small number of submarine vessels were unable to mail in their materials or provide an administration record and opted to provide a vessel count.

### **5.15 What types of issues were encountered when gathering pier location for the military vessels home-ported in San Diego?**

At the time of the 2010 Census Shipboard Enumeration Operation there were 59 military vessels home-ported to San Diego. Since the San Diego Bay covers three different GUs, (City of San Diego, National City, and Coronado), special procedures were developed to geocode these vessels assigned to the homeport of San Diego. The special procedures for geocoding vessels to San Diego were as follows;

- If a vessel was docked in the San Diego Bay on April 1, 2010, then the vessel was geocoded to the GU where the vessel was docked.
- If a vessel was out at sea on April 1, 2010, then the vessel was geocoded to the GU where the vessel was last docked in the San Diego Bay.
- If a vessel was an aircraft carrier, then the vessel was automatically geocoded to Coronado, since Coronado's piers are the only ones that are deep enough to dock an aircraft carrier.

The U.S. Navy and U.S. Coast Guard specified the location of the vessels assigned to the homeport of San Diego by the pier number or stated that the vessel was docked in Coronado or Point Loma. Piers 1-5 were geocoded to the City of San Diego and piers 6-14 and Mole Pier were geocoded to National City.

The U.S. Navy and the U.S. Coast Guard agreed to provide the Census Bureau with the location of the vessels assigned to the homeport of San Diego on April 1, 2010. The U.S. Navy provided a list of 38 vessels that were docked on April 1, 2010, and the usual pier location for the 19 remaining vessels that were out at sea on April 1, 2010.

There was a miscommunication on what information was needed for vessels that were out at sea on April 1, 2010. As a result the DMD had to go back and ask the U.S. Navy for the pier from which the 19 vessels departed. The U.S. Navy was able to provide the necessary information but it required that the U.S. Navy e-mail the commander of each vessel to see from which pier the vessel departed. This process was time consuming, and is avoidable in the future if the Form D-47, Census Location Report for Military Vessels is revised to ask for the pier of departure for vessels assigned to the homeport of San Diego and out at sea on April 1, 2020.

The U.S. Coast Guard provided the pier location for their two vessels assigned to the homeport of San Diego, which were docked on April 1, 2010.

### **5.16 How many vessels submitted administrative records compared to those vessels that mailed in their materials?**

In order to save time in shipping new materials to nonresponding vessels, an option of providing administrative records was given to nonresponding vessels on June 21, 2010. None of the vessels provided administrative records prior to the option being available on June 21, 2010. The NPC used the data on the administrative records to complete the SCRs

for the vessels. The staff at NPC was instructed to transfer the exact information from the administrative records onto the SCRs. In cases where the vessel only provided a vessel count, the NPC entered Person 1, Person 2 ....etc. on the SCRs. NPC then entered the vessel's name and operator in the Vessel Name field and the Owner/Operator field.

In the table below, the number of vessels that submitted administrative records includes vessels that submitted, at a minimum a vessel crew list.

Also, in the table below, the number of vessels that mailed in SCRs includes vessels checked-in to ATAC but later determined to be out-of-scope for the 2010 Census Shipboard Enumeration.

**Table 8 Number of Vessels that Submitted Administrative Records**

Vessel Type	Number of Vessels that Mailed In SCRs	Number of Vessels that Submitted Administrative Records	Number of Vessels that Only Submitted a Vessel Count	Total Number of Vessels
Maritime	245	12	15	272
Military	253	21	3	277
<b>TOTAL</b>	<b>498</b>	<b>33</b>	<b>18</b>	<b>549</b>

Source: *Vessel Address and Delete Tracker (D-47 No SCR Tab)* (De Vos, 2011a)

### 5.17 What was the number of vessels enumerated?

Vessels were considered enumerated if the vessel completed and returned a geocodable Form D-47, Census Location Report, and at least one SCR. Both the SCRs and the Form D-47, Census Location Report were checked into the ATAC system.

**Table 9 Number of Vessels Checked into ATAC (Enumerated)**

GQ Type	Total Number of Vessels
Military	277
Maritime	272
<b>TOTAL</b>	<b>549</b>

Source: *Shipboard Tracking Report (Enumeration Tab)* (De Vos, 2012) and the *Geocoding Summary Report* (2009)

### 5.18 What was the number of vessels processed?

The 549 vessels that were checked-in to ATAC (see Table 9) went through several checks and edits by the NPC and Census Bureau Headquarters. These checks and edits were implemented to determine if a vessel was in-scope for the 2010 Shipboard Enumeration Operation. A vessel was considered in-scope if it: had a population equal to or greater than one, and contained a valid state, county and collection block. In total, 115 vessels did not meet the criteria to be included in the final 2010 Census tabulations.

Vessels failed the checks and edits for the following reasons:

- 89 due to being a foreign vessel
- 10 due to being ungeocodable



- 16 due to a zero population count

In total, 434 vessels (259 military and 175 maritime) completed all of the 2010 Census processing, checks, and edits. These vessels contributed to the final 2010 Census tabulations.

**Table 10 Number of Vessels Processed**

GQ Type	Total Number of Vessels
Military	259
Maritime	175
<b>Total</b>	<b>434</b>

Source: *2010 Census Edited File* (Williams, Andre 2011)

### 5.19 What was the population count?

The population count is the number of people tabulated on vessels. In total, 51,864 respondents were tabulated on 434 vessels for the 2010 Census. Of those 51,864 respondents, 49,473 of the respondents were tabulated on 259 military vessels and 2,391 were tabulated on 175 maritime vessels.

**Table 11 Population Count for Vessels after Processing**

GQ Type	Total Population Count
Military	49,473
Maritime	2,391
<b>Total</b>	<b>51,864</b>

Source: *2010 Census Edited File* (Williams, Andre 2011)

### 5.20 What happened to the 1,071 vessels in the vessel universe?

The 2010 Census Shipboard Enumeration Operation initial universe was comprised of 1,071 vessels. The number of vessels that made it through the entire 2010 Census editing process was 434, so what happened to all of the vessels?

There were three different phases for the 2010 Census Shipboard Enumeration Operation: Enumeration Phase, NPC Processing Phase, and the Headquarters Processing Phase.

- The Enumeration Phase included the actions of collecting data from the vessels and entering the data into the ATAC system. Vessels that either did not send any materials or sent incomplete materials were removed during the Enumeration Phase. In order to be considered complete, a vessel was required to send in a completed Form D-47, Census Location Report, which provides the vessels count and geographic information. Also, during this phase, vessels called in or e-mailed the Census Bureau explaining the reason why they felt their vessel was out-of-scope for the operation. These reasons included: day-tripper, dry-docked, vessel was sold for parts or materials, decommissioned, vessel was in dock for repair, and vessel was not owned by the military. Other vessels mailed-in their materials but had a foreign port, which was not in scope for the operation. In total, 522 vessels were removed during the Enumeration Phase.

- The NPC Processing Phase began once vessels were entered into ATAC. The NPC was responsible for creating a GQ Add Table for all vessels considered to be in-scope. In order for a vessel to be considered in-scope it must: have a population equal to or greater than one, and contain a valid state, county and collection block. Vessels that did not meet these criteria were removed from the GQ Add Table that was sent to Census Bureau Headquarters. In total, 97 vessels were removed during the NPC Processing Phase.
- Vessels that were included in the GQ Add Table that was sent from NPC to Census Bureau Headquarters made it to the Headquarters Processing Phase. The Headquarters Processing Phase removed vessels if the vessel: was found to be ungeocodable, or had a foreign address or had a population of zero after all persons reporting a valid UHE were removed from the count. In total, 18 vessels were removed in the Headquarters Processing Phase.

**Table 12 What Happened to the Initial Vessel Universe of 1,071 Vessels?**

Phase	Reason for Not Being Counted	Number of Vessels
Total number of vessels in the vessel universe		1,071
Enumeration Phase	Not Returned	
	Vessels that only returned a Form D-46	(40)
	Vessels that returned SCRs and were missing a Form D-47	(62)
	No materials returned	(166)
	Materials to vessels that came back as undeliverable	(25)
	Out-of-scope vessels:	(229)
	Day tripper	41
	Dry docked	94
	Sold for parts/materials	6
	Decommissioned	11
	In dock for repair	5
	Not owned by the military	2
	Foreign Vessels	70
NPC Processing Phase	Out-of-scope vessels:	(97)
	Vessel checked-in to ATAC but no SCRs	1
	Ungeocodable	9
	Foreign Vessels	87
HQ Processing Phase	Out-of-scope vessels:	(18)
	Ungeocodable	1
	Foreign Vessels	2
	All persons on the vessel were counted at their UHE	15
<b>Total number of vessels removed from the vessel universe</b>		<b>637</b>
<b>Total number of vessels included in the 2010 Census tabulations</b>		<b>434</b>

Source: *Shipboard Tracking Report (Enumeration Tab and Processing Tab)* (De Vos, 2012), *2010 CUF and 2010 DRF* (Williams, Andre 2011)

## 5.21 How many questionnaires reported a usual home elsewhere?

Determining how many questionnaires reported a UHE is a two step process. First, the Census Bureau looked at how the respondent answered question number 8 on the SCR. Then the Census Bureau determined if the address provided on the SCR was a valid 2010 Census address.

Question number 8 on the SCR reads, “Do you have a house, apartment, or mobile home where you usually stay when off duty?” If the respondent answered “Yes” then the respondent was asked to provide the address of the UHE.

Table 13 contains data that were data captured off of the SCRs prior to processing. The number of respondents who answered “Yes” (has a UHE) to question number 8 was 57,426, which accounted for 64.9 percent of all SCRs completed. The number of respondents who answered “No” (does not have a UHE) and therefore did not enter an UHE address on the SCR, was 31,053, which accounted for 35.1 percent of all SCRs completed. These 31,053 respondents were automatically tabulated on the vessel and were not part of the Non-ID process.

**Table 13 How Many Respondents Reported a UHE?**

	Number of SCRs	Percent of SCRs
Number of respondents who marked “Yes” to question number 8 (has a UHE) on the SCR	57,426	64.90%
Number of respondents who marked “No” to question number 8 (does not have a UHE) on the SCR	31,053	35.10%
<b>Total number of completed SCRs</b>	<b>88,479</b>	<b>100.0%</b>

Source: 2010 DRF (Williams, Andre 2011)

A mapping problem was discovered in November 2010 during the formalized CUF review of the UHE data for SCRs. The response data for the question 8, the UHE screener question, were inadvertently mapped to the incorrect variables during processing. This programming error occurred because the processing system was designed to capture the “Yes” and “No” responses for both the Individual Census Report (ICR) and the SCR UHE screener questions in the same way, but the “Yes” and “No” responses for the two forms had the exact opposite meaning.

Question number 6 on the ICR reads “Do you live or stay in this facility MOST OF THE TIME?” If the respondent answered “Yes” then the respondent does **not** have a UHE.

Question number 8 on the SCR reads, “Do you have a house, apartment, or mobile home where you usually stay when off duty?” If the respondent answered “Yes” then the respondent had a UHE.

Once the problem was discovered, the SCR data were reprocessed to resolve the mapping of the UHE data. After the reprocessing it was found that 57,426 respondents marked “Yes” to question number 8 (has a UHE) on the SCR. A significant number, 20,811, of the SCRs that marked “Yes” for question 8 did not provide an address that matched to the MAF. These 20,811 respondents were counted on the vessels and were not affected by the programming error since they did not provide an address that matched to the MAF. The remaining 36,615 respondents that marked “Yes” to question number 8 (has a UHE) on the SCR matched to a good address on the MAF. These respondents were removed from the vessel counts, because they provided an address that matched to the MAF. Because this data capture and processing

error was identified after completion of the Non-ID process and during the final creation of tabulation data files, the Census Bureau determined there was not sufficient time to conduct any further processing for those person records that matched to a good address on the MAF. That additional processing would have required us to compare the person information on the UHE forms to see if the respondents were already included on the questionnaires for each of the matched addresses. Within the legal deadlines for producing census results, there would not have been time to conduct this matching, nor any additional field/telephone followup that might have been required for situations where matching was inconclusive. Because we determined that we did not have time for the additional processing, we had two options--(1) assume all those persons had been included on the census household rosters for those matched UHE addresses, and thus would be included in the census count at those locations, or (2) assume all those persons had not been included on the rosters at the UHE addresses, and thus should be tabulated as part of the group quarters population on the vessels where they filled out the UHE forms. The Census Bureau chose option (1) because past history and research<sup>4</sup> has shown us that these respondents were very likely to have been included on the household roster of the reported UHE address. The determination that there was not sufficient time to do the additional processing, and the choice of option (1), were made by the Decennial Leadership Group--the Senior Executive Staff responsible for the highest-level decision-making and oversight for the 2010 Decennial Census.

**Table 14 Number of Respondents Who Marked They had a UHE**

	Number of SCRs	Percent of SCRs
Number of respondents who marked "Yes" to question number 8 (has a UHE) on the SCR and did not provide an UHE that matched to an address on the MAF	20,811	36.24%
Number of respondents who marked "Yes" to question number 8 (has a UHE) on the SCR and provided an UHE that matched to an address on the MAF	36,615	63.76%
<b>Total number respondents who marked "Yes" to question number 8 (has a UHE) on the SCR</b>	<b>57,426</b>	<b>100.0%</b>

Source: 2010 DRF (Williams, Andre 2011)

For the future, it is recommended that the SCR and ICR follow the same "Yes" and "No" patterns for questions concerning UHEs.

### **5.22 Were there notable differences for the usual home elsewhere information for vessels that submitted administrative records compared to those vessels that mailed in their materials?**

There was a 6.9 percent difference of respondents who completed a SCR and entered a UHE as opposed to a SCR which was completed via administrative record and having a UHE. Respondents who completed and mailed their materials back with the vessel entered a UHE 64.7 percent of the time. SCRs that were completed at the NPC via administrative records

<sup>4</sup> During the 1990 Census, 82.6 percent of individuals who completed a SCR and reported an UHE address, were matched to an individual on the UHE's household roster (Wajer, 1993).

that were received from the vessels, reported a UHE 71.6 percent of the time. Overall, 64.9 percent of the SCRs received for the 2010 Census Shipboard Enumeration Operation entered a UHE address.

**Table 15 Percent of UHE Addresses by Data Collection Method (Administrative Record and Mail Returns)**

	Number of SCRs Submitted	Number of SCRs with a UHE	Percent with UHE Addresses
SCRs Completed Via Administrative Records	2,957	2,116	71.56%
SCRs Received Via Mail-in	85,522	55,310	64.67%
<b>Total</b>	<b>88,479</b>	<b>57,426</b>	<b>64.90%</b>

Source: 2010 DRF (Williams, Andre 2011)

### **5.23 What was the percent of stateside usual home elsewhere addresses provided for vessels geocoded as being foreign compared to vessels geocoded stateside?**

Foreign vessels were considered out-of-scope for the 2010 Census Shipboard Enumeration Operation. Military vessels were classified as a foreign vessel if the vessel was assigned to a foreign homeport. A maritime vessel was classified as a foreign vessel if it met either one of the following requirements:

- Docked in a foreign port on April 1, 2010
- Sailing from a foreign port to another foreign port
- Sailing from a U.S. port to a foreign port
- Sailing from a foreign port to a U.S. port

The NPC was instructed not to check-in SCRs for vessels categorized as a foreign vessel and to store the SCRs separately from stateside vessels. The DMD reviewed these SCRs to count the number of SCRs that contained a stateside address in the UHE field. Data from these counts are included in Table 15 and Table 16 below, except for three U.S. Navy vessels and eleven maritime vessels. The SCRs from these vessels were mistakenly submitted to DRIS for data capture prior to the analysis of their SCRs.

Sixty-four percent of the SCRs associated with maritime vessels classified as a foreign vessel contained a stateside UHE address compared to only 2.3 percent of the SCRs associated with military vessels classified as a foreign vessel. In summary, only 25.3 percent of the SCRs submitted by foreign vessels included an SCR with a stateside UHE address compared to 64.9 percent of SCRs received from stateside vessels.

The MARAD recommended that the Census Bureau change the residency rules in how the Census Bureau determines if a maritime vessel is considered foreign. The MARAD stated that U.S. flag vessels are considered a part of U.S. soil, and that crewmembers have to pay federal taxes no matter where the vessel is at any given point. A vessel's regular route may be, Boston to Baltimore to Miami to Costa Rica and back. If the vessel was sailing to or from Costa Rica on April 1, 2010, then the vessel was considered a foreign vessel, even

though the vessel was only sailing to and from Costa Rica for one small part of their regular route. Crewmembers on maritime vessels considered to be foreign reported a stateside UHE 64.3 percent of the time. By revising the Census Bureau’s residency rules in how maritime vessels are determined to be foreign, the Census Bureau could have added 1,305 more respondents in the 2010 Census tabulations. It is recommended that the residency rules be reviewed for determining if a maritime vessel is foreign, prior to the 2020 Census.

**Table 16 Percent of Stateside UHE Addresses for Foreign Vessels**

Vessel Type	Number of Vessels Geocoded as being Foreign and Submitted SCRs	Number of SCRs Submitted	Number of SCRs Submitted with a Stateside UHE	Percent of Stateside UHE Addresses
Maritime	63	2,030	1,305	64.29%
Military	14	3,448	80	2.32%
<b>TOTAL</b>	<b>77</b>	<b>5,478</b>	<b>1,385</b>	<b>25.28%</b>

Source: *Foreign Vessel Residency Rule Analysis – Non Title 13* (De Vos, 2011b)

**Table 17 Percent of UHE Addresses for Stateside Vessels**

	Number of SCRs Submitted	Number of SCRs with a Stateside UHE	Percent of Stateside UHE Addresses
<b>Stateside SCRs*</b>	<b>88,479</b>	<b>57,426</b>	<b>64.90%</b>

Source: *2010 DRF* (Williams, Andre 2011)

\*This includes one Puerto Rico vessel

## 5.24 Were there any language issues?

The Census Bureau did not receive feedback from any vessels that they were unable to complete the forms due to language issues.

## 5.25 Did the 2010 Census Shipboard Enumeration Operation meet the scheduled deadlines?

The 2010 Census Shipboard Enumeration Operation had 48 activities on the Master Address Schedule (MAS) and of those 48 activities, 26 activities were completed early, on time or less than one week late. Twenty-two of the activities on the MAS were completed later than a week of the due date.

All planning and preparation activities of the enumeration operation were completed on time. All materials were printed, prepared for kitting and shipped according to schedule. The ATAC system was completed on time and ready for check-in prior to the NPC receiving any materials back from the vessels.

The vessel geocoding, vessel check-in, Add Table and Linkage file creations and deliveries were all late due to the late receipt of returns from the U.S. Navy vessels. The DSPO was able to process all of the in-scope vessels in time to have them included in the final 2010 Census counts even though the scheduled final deliveries were delivered late.

Twelve schedule change requests were submitted for the 2010 Census Shipboard Enumeration Operation and all were approved. Of the 12 schedule change requests submitted: one request was for a schedule change due to a change in procedure, five were for relationship or logic issues, two were for a change in division responsibilities, and four were for a change in the baseline end date. Only one change request was submitted during the time of the actual enumeration. That change request was for an extension of the operation so that the late arriving U.S. Navy and U.S. Coast Guard vessels could be included in the 2010 Census.

### **5.26 Did the 2010 Census Shipboard Enumeration Operation come under or over budget?**

The 2010 Census Shipboard Enumeration Operation was completed under budget. Only 29 percent of the budget set aside for the operation (budget was \$422,405; actual cost was \$121,275)<sup>5</sup> was used (Burns, 2010). One reason the operation came under budget was due to improvements in the vessel kit assembly. The operation was budgeted so that vessel kits would be assembled one at a time based on the vessel size. Instead of creating individual vessel kits, seven generic vessel kits were created, which could be used for any vessel. A vessel received a certain number of generic vessel kits depending on its size and on the vessel's type, maritime or military. By using the generic vessel kits the NPC was able to assemble and prepare the vessel kits for shipping in a much more efficient and cost effective way.

The largest cost for the operation was the shipping of the materials to the vessels, which accounted for 61 percent (\$79,140) of the actual cost (Burns, 2010). A recommendation to lower the cost of the Shipboard Enumeration Operation in the future is to reduce the amount of materials shipped to the vessels. An Internet based enumeration method could greatly reduce the cost for the operation. In addition, determining which vessels were out of scope prior to shipping materials to the vessels would save on shipping cost.

### **5.27 What was the number of staff assigned to the Shipboard Enumeration Operation?**

The 2010 Census Shipboard Enumeration Operation did not use field staff for the operation. The operation was conducted via self-enumeration through the use of mail-out/mail-back procedures.

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<sup>5</sup> The cost results presented in this assessment were generated by program office staff using methods predating the US Census Bureau's commitment to comply with Government Accountability Office's cost estimating guidelines and the Society of Cost Estimating and Analysis best practices. Hence, while the Census Bureau believes these cost results are accurate and will meet the needs for which they will be used, the methods used for estimating costs of 2010 Census operations may not meet all of these guidelines and best practices. The Census Bureau will adhere to these guidelines in producing 2020 Census cost estimates.



## **6. Related Assessments**

The 2010 Census Group Quarters Enumeration Operational Assessment documented the results of the Group Quarters Enumeration Operation as well as provided recommendations and best practices that can be used during the next planning cycle to support the 2020 Census Group Quarters Enumeration Operation. It also reported the population data by GQ types.

The 2010 Census Federally Affiliated Overseas Count Operational Assessment documented the results of the Federally Affiliated Overseas Count Operation as well as provided recommendations and best practices that can be used during the next planning cycle to support the 2020 Census Federally Affiliated Overseas Count Operation.

The 2010 Census Decennial Response Integration System (DRIS) Paper Questionnaire Data Capture Assessment Report documents the final workloads, costs, and lessons learned for all aspects of the DRIS Paper Questionnaire Data Capture operations. The assessment will also provide data for the next planning cycle for the 2020 Census.

## **7. Key Lessons Learned, Conclusions, and Recommendations**

### **Lessons Learned Summary**

Debriefings for the 2010 Shipboard Enumeration Operation were conducted with NPC staff, Census Bureau Headquarters staff and members of the CJSWG. This assessment will discuss key lessons learned. See Appendix P for the detailed Lessons Learned for the 2010 Census Shipboard Enumeration Operation (Draft, July, 2010).

- Maintaining a strong relationship with all maritime or military agencies had a positive effect on the response rate received from the vessels. Communicating with the agencies at least one year in advance is critical to the success of the Census.
- Expand the CJSWG to include a primary point of contact for the Military Sealift Command. In addition, it is recommended that a Maritime Operator Working Group be created and maintained prior to and during the operation so that communication can be improved between the Census Bureau and the maritime agencies.
- Generic vessel kits should be used for future censuses.
- Materials should not be mailed to U.S. Navy vessels assigned to foreign homeports in the future to save cost and confusion. For the 2010 Census, the U.S. Navy provided the Census Bureau with an updated vessel list on April 1, 2010. This updated vessel list could be used for changes in homeports from foreign to stateside.
- The Shipboard Team believes that a higher number of vessels would have completed and returned the Form D-47, Census Location Report if the form was on colored paper. This would make the form stand out and be easily referenced in the

enumeration instructions. The Shipboard Team suggests that cognitive testing be conducted on the use of a colored form for the Form D-47, Census Location Report.

- Form D-40, Confidentiality Envelope should contain an instruction stating that the Form D-40, Confidentiality Envelope should not be mailed individually and that it should be given to the Project Officer.
- The U.S. Postal Service must be used when mailing to military vessels. FedEx cannot deliver to military vessels.

## **Conclusion and Recommendations**

In conclusion, the 2010 Census Shipboard Enumeration Operation was completed successfully. Respondents living on military or maritime vessels were provided an opportunity to participate in the 2010 Census. In total, 51,864 respondents were included in the 2010 Census due to the 2010 Census Shipboard Enumeration Operation. Listed below are recommendations that are intended to continue to help the Census Bureau improve on collecting Census data for military and maritime vessels in future Censuses.

- **Send detailed guidance to maritime owner/operators informing them of the criteria for being included in the Shipboard operation. Request confirmation is sent to the Census Bureau that their vessel does or does not meet the criteria.** This would save money by not having to ship materials to vessels that are out-of-scope for the operation.
- **Conduct research to determine how electronic transfer of data could be used for enumeration and to eliminate the shipping of all vessel materials.** The turn around for collecting Census data would be much quicker if the Census Bureau eliminated the need to mail materials to and from the vessels. By giving the vessels an option of completing Census materials via the Internet, the Census Bureau can cut down the kit preparation and enumeration time and save money in shipping cost.
- **Examples of completed materials should be included in the enumeration materials.** One U.S. Navy vessel project officer suggested the Census Bureau include examples of completed materials along with the instructions. A completed example of the Form D-47, Census Location Report and SCR was strongly recommended. Some vessels did not complete the Form D-47, Census Location Report, which resulted in the NPC and DMD making follow-up calls to obtain the necessary information for the form.
- **Add a pier location question to the Form D-47, Census Location Report for Military Vessels.** This would assist with the geocoding of vessels assigned to a multi-jurisdictional homeport that are either docked or out at sea on Census Day. This would cut down on the amount of work that the United States Navy would have to do in helping the Census Bureau geocode vessels assigned to multi-jurisdictional homeports, such as San Diego.

- **Conduct a review of the selection of tabulation blocks for military vessels prior to the data being finalized. Add this review to the Master Activity Schedule for the 2020 Census and have the review signed off on by at least two Branch Chiefs, with one of the Branch Chiefs being from the Geography Division.** The Census Bureau selected collection blocks for the military homeports prior to the 2010 tabulation blocks being defined. In selecting the collection block to represent vessels located in Coronado, CA, the Census Bureau unknowingly selected a collection block that contained five tabulation blocks, one of which was located in the City of San Diego. The vessels that were located in Coronado ended up being tabulated in the one tabulation block located in the City of San Diego. The vessels were placed in the tabulation block located in the City of San Diego after they completed the 2010 Tabulation Block Geocoding hierarchy process. Since the vessels did not have a map spot or city-style address, the 2010 Tabulation Geocoding process had to use the last step in the geocoding hierarchy, which was selecting the largest tabulation block within the collection block. In this case, the largest tabulation block within the collection block assigned to Coronado vessels, was the tabulation block located in the City of San Diego. As a result, vessels were incorrectly tabulated to the City of San Diego, when they should have been tabulated to Coronado. A post tabulation review of military vessels could have caught this error prior to the data being finalized.
- **Have the U.S. Navy and U.S. Coast Guard review and approve a detailed Census collection block for each military homeport.** In order to avoid issues in the future with the geocoding of military homeports it is recommended that detailed maps with the suggested collection block be reviewed and approved by a representative from the U.S. Navy and U.S. Coast Guard. This would allow the Census Bureau to confirm that the homeports are correctly assigned to a collection block located on a military installation.
- **Review the residency rules for vessels sailing to or from foreign ports prior to the 2020 Census.** The MARAD suggested that the Census Bureau revise the residency rules to consider vessels sailing to or from stateside to a foreign port be included in the 2010 Census. For the 2010 Census, there were 1,305 respondents on maritime vessels which could have been included in the final 2010 Census tabulations had the Census Bureau revised the residency rules regarding foreign vessels.
- **Maintain consistent answer categories regarding the question on having a usual home elsewhere on the ICR and SCR.** The difference in answer categories concerning the question on usual home elsewhere resulted in a programming error during the data capture phase of the 2010 Census Shipboard Enumeration Operation. By maintaining consistent answer categories between the forms, the Census Bureau can reduce the possibility of a similar programming error occurring in the future. The wording for the usual home elsewhere question was effective for the 2010 Census Shipboard Enumeration and any rewording of the question to alter the answer category in the future should go through cognitive testing.

## **8. Acknowledgements**

The authors of this assessment wish to thank the members of the Shipboard Team and all stakeholders who participated in the lessons learned sessions. Thanks to Leticia Anderson for her contribution in gathering information on the procedures and processes that took place at NPC; her input into the document was invaluable. Thanks to the following for their review and comments: Daniel Keefe, Charles Holmberg, Kathy Brewer, Robin Pennington, Shawn Hanks, Charles Kahn, Dora Durante, Annetta Smith, Edmond Jarrell, Asaph Young Chun, Jean Williams, Karen Pinkston, Deborah Russell, and Celeste Epps.

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## APPENDICES

### Appendix A: 2010 Census Shipboard Enumeration Key Activities Schedule

Activity ID	Activity Name	Baseline Start	Baseline Finish	Actual Start	Actual Finish
10SHB-19200	Assemble Maritime Operational Kits at NPC	11/17/09	12/24/09	12/9/09	12/24/09
10SHB-19210	Assemble Maritime Vessel Supply Kits in NPC	11/17/09	12/24/09	12/9/09	12/24/09
10SHB-19220	Assemble Military Vessel Supply Kits in NPC	11/17/09	12/24/09	12/9/09	12/24/09
10SHB-19240	Ship Vessel Materials to Maritime Operators	1/12/10	5/14/10	1/12/10	3/16/10
10SHB-19250	Ship Vessel Materials to Military Vessels	1/18/10	5/14/10	1/12/10	2/10/10
10SHB-11370	Develop Checkin/Control System	10/13/09	2/12/10	10/7/09	1/29/10
10SHB-03130	Conduct Shipboard Vessel Enumeration	4/1/10	5/14/10	3/31/10	7/27/10
10SHB-10090	NPC Receives Completed Materials from Vessels	4/5/10	6/14/10	2/24/10	7/27/10
10SHB-11430	NPC Conducts SCR Checkin and Updates Control File	4/5/10	6/14/10	4/8/10	7/27/10
10SHB-11070	NPC Conducts Vessel Clerical Geocoding of Military Vessels	4/5/10	6/14/10	4/23/10	7/27/10
10SHB-11080	NPC Conducts Vessel Clerical Geocoding of Maritime Vessels	4/5/10	6/14/10	4/23/10	7/15/10
10SHB-19280	NPC Delivers Vessel Add Table to DSPO	7/15/10	7/15/10	7/28/10	7/28/10
10SHB-10140	NPC Delivers End of Operation Linkage File to DSPO and DRIS	7/9/10	7/9/10	7/28/10	7/28/10
10SHB-10140	NPC Delivers SCRs to DRIS	7/9/10	7/9/10	7/9/10	7/9/10

# Appendix B: D-23, Shipboard Census Report

OMB No. 0607-0919-C: Approval Expires 12/31/2011

United States<sup>®</sup>  
**Census  
2010**

**Shipboard Census Report**

U.S. DEPARTMENT OF COMMERCE  
Economics and Statistics Administration  
U.S. CENSUS BUREAU

Use a blue or black pen.  
**Start here**

**1. What is your name? Print name below.**

Last Name

First Name  MI

**2. What is your sex? Mark  ONE box.**

Male  Female

**3. What is your age and what is your date of birth?**  
*Please report babies as age 0 when the child is less than 1 year old.*  
*Print numbers in boxes.*

Age on April 1, 2010   Month   Day   Year of birth

→ **NOTE:** Please answer BOTH Question 4 about Hispanic origin and Question 5 about race. For this census, Hispanic origins are not races.

**4. Are you of Hispanic, Latino, or Spanish origin?**

No, not of Hispanic, Latino, or Spanish origin

Yes, Mexican, Mexican Am., Chicano

Yes, Puerto Rican

Yes, Cuban

Yes, another Hispanic, Latino, or Spanish origin — *Print origin, for example, Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.* ↴

**5. What is your race? Mark  one or more boxes.**

White

Black, African Am., or Negro

American Indian or Alaska Native — *Print name of enrolled or principal tribe.* ↴

<input type="checkbox"/> Asian Indian	<input type="checkbox"/> Japanese	<input type="checkbox"/> Native Hawaiian
<input type="checkbox"/> Chinese	<input type="checkbox"/> Korean	<input type="checkbox"/> Guamanian or Chamorro
<input type="checkbox"/> Filipino	<input type="checkbox"/> Vietnamese	<input type="checkbox"/> Samoan
<input type="checkbox"/> Other Asian — <i>Print race, for example, Hmong, Laotian, Thai, Pakistani, Cambodian, and so on.</i> ↴	<input type="checkbox"/> Other Pacific Islander — <i>Print race, for example, Fijian, Tongan, and so on.</i> ↴	

Some other race — *Print race.* ↴

Form **D-23** (1-22-2009)

**6. What is the name of the ship to which you are assigned?**

**7. What is the name of the operator of this ship?**  
*If U.S. Government operator, specify Navy, Coast Guard, etc.*

**8. Do you have a house, apartment, or mobile home where you usually stay when off duty?**

Yes → *Go to Question 9 on the back.*

No, I live on this ship. → *This completes the form.*

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**9. (If Yes) What is the full address of the place where you live or stay MOST OF THE TIME?**

*Please complete all that apply.*

Street address number

Street name

Apartment number

Rural route address

City

County

State or foreign country

ZIP Code

The U.S. Census Bureau estimates that, for the average respondent, this form will take about 5 minutes to complete, including the time for reviewing the instructions and answers. Send comments regarding this burden estimate or any other aspect of this burden to: Paperwork Reduction Project 0607-0919-C, U.S. Census Bureau, AMSD-3K138, 4600 Silver Hill Road, Washington, DC 20233. You may e-mail comments to <Paperwork@census.gov>; use "Paperwork Project 0607-0919-C" as the subject.

Respondents are not required to respond to any information collection unless it displays a valid approval number from the Office of Management and Budget.



**FOR OFFICIAL USE ONLY**

GQ Control Number

A. PN

B. JIC1

C. JIC2

***Thank you for completing your official 2010 Census form.***





## Appendix C: D-48(L) Owner/Operator Letter

D-48(L)  
(4-2009)



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Economics and Statistics Administration**  
**U.S. Census Bureau**  
Washington, DC 20233-0001  
OFFICE OF THE DIRECTOR

FROM THE ACTING DIRECTOR  
U.S. CENSUS BUREAU

To: Owner/operator:

The U.S. Census Bureau requests your assistance in conducting the 2010 Census by helping us to obtain a count as of Census Day, April 1, 2010, of all officers, crewmembers, and passengers aboard U.S. Flag Vessels that your company owns or operates.

We have obtained a list of these ships from the Maritime Administration and other sources, along with an estimated number of persons aboard. To complete the enumeration, we are enclosing a vessel kit to be distributed to each ship.

We are asking you to distribute the vessel kit to the Project Officer aboard each ship by March 1, 2010. This will give the officers sufficient time to review the materials before April 1. Additionally, if you notice that we have not included a vessel kit for one of your vessels, complete the enclosed Census Information for U.S. Flag Vessels (D-34) and mail it in the prepaid envelope.

The vessel kit contains the following materials:

1. One Acknowledgement of Receipt of Shipboard Census Materials Form (D-46);
2. A supply of Shipboard Census Reports Form (D-23);
3. A supply of Confidentiality Envelopes Form (D-40);
4. One Census Location Report for Maritime Vessels (D-47);
5. One Self-Enumeration Quick Sheet (D-49);
6. Two publicity posters (D-38) and Fact sheets (D-3278), for display;
7. Postage-paid United States Postal Service envelope(s); and
8. Pencils and sharpeners.

Please display the enclosed posters and factsheets, publicizing the upcoming 2010 Census in your office or other public locations.

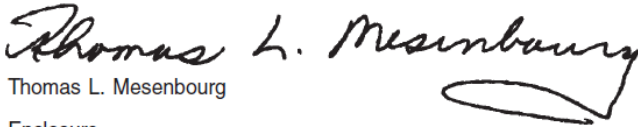
The Census Bureau estimates that on average, it will take no more than 5 minutes for each respondent to read and complete the Census Information for U.S. Flag Vessels. Send any comments regarding this burden of estimate or any other aspect of this burden to: Paperwork Reduction Project 0607-0919-C, U.S. Census Bureau, AMSD-3K138, 4600 Silver Hill Road, Washington, DC 20233. You may e-mail comments to <Paperwork@census.gov>; use "Paperwork Project 0607-0919-C" as the subject.

Your response to these inquiries is confidential by law (Title 13, United States Code). The same law requires that you answer the questions to the best of your knowledge.

If you have any questions, please contact Ms. Leticia Anderson at (888) 595-1335 or <npc.shipboard.enumeration@census.gov>.

Thank you for helping to ensure a complete and accurate count of the population in 2010.

Sincerely,

  
Thomas L. Mesenbourg

Enclosure

United States  
**Census**  
**2010**

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## Appendix D: D-47(L), Census Location Report for Maritime Vessels

D-47(L)  
(5-2009)



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Economics and Statistics Administration**  
**U.S. Census Bureau**  
Washington, DC 20233-0001  
OFFICE OF THE DIRECTOR

FROM THE ACTING DIRECTOR  
U.S. CENSUS BUREAU

**Attention: Project Officer** – The U.S. Census Bureau in a cooperative effort with your ship's operator, requests your assistance in conducting the 2010 Census by obtaining a count of all officers, crewmembers, and passengers aboard your vessel on Census Day, April 1, 2010. This is a process we have used successfully in previous decennial censuses.

We have asked your operator to forward this form and the census materials to you. Please complete the enclosed Acknowledgement of Receipt of Shipboard Census Materials (D-46), upon receipt of materials and return it to the Census Bureau immediately.

On April 1, 2010, please:

1. Complete the Location Report (D-47 (MAR)) on the reverse of this letter;
2. Distribute one Shipboard Census Report (D-23) and Confidentiality Envelope (D-40), to each person aboard the vessel;
3. Collect the completed Shipboard Census Reports (D-23) in sealed envelopes (D-40);
4. Return the Shipboard Census Reports (D-23) and this form to the Census Bureau in the postage-paid envelope to: U.S. Census Bureau, National Processing Center, Shipboard Processing, 1201 East 10th Street, Building 61G, Jeffersonville, IN 47132.

Encourage cooperation in completing the questionnaire by explaining that the information provided is seen only by sworn Census Bureau employees and is used only for statistical purposes. By law (Title 13, United States Code), census employees are subject to fine and/or imprisonment for any disclosure of an individual's answers to census questions. Only after 72 years does the information provided become available to other government agencies and the public. The same law requires individuals to answer the questions to the best of their knowledge.

The Census Bureau estimates that on average, it will take no more than five minutes for each respondent to read and complete the Shipboard Census Report. Send any comments regarding this burden of estimate or any other aspect of this burden to: Paperwork Reduction Project 0607-0919-C, U.S. Census Bureau, AMSD-3K138, 4600 Silver Hill Road, Washington, DC 20233. You may e-mail comments to <Paperwork@census.gov>; use "Paperwork Project 0607-0919-C" as the subject.

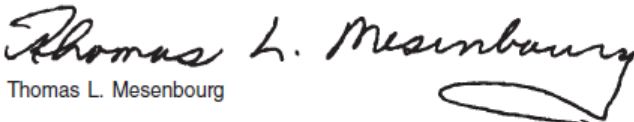
Personnel on board Great Lake vessels that have been fitted out after April 1, 2010, will not be enumerated on the ship and are not required to fill out the Shipboard Census Report. Project Officers of such vessels should indicate on the Location Report (D-47 (MAR)) that the vessel was not fitted out by April 1, and send it in the return envelope.

Please destroy any unused Census materials including the blank Shipboard Census Reports (D-23).

If you have any questions, please contact Ms. Leticia Anderson at (888) 595-1335 or <npc.shipboard.enumeration@census.gov>.

Thank you for helping ensure a complete and accurate count of the population in 2010.

Sincerely,

  
Thomas L. Mesenbourg

Enclosure

United States  
**Census**  
**2010**

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FORM **D-47(MAR)**  
(5-11-2009)

U.S. DEPARTMENT OF COMMERCE  
Economics and Statistics Administration  
U.S. CENSUS BUREAU

## CENSUS LOCATION REPORT FOR MARITIME VESSELS 2010 Census

<b>1.</b> Name of vessel				
<b>2.</b> Name of person completing this report			<b>3.</b> Title	
<b>4.</b> Vessel contact person			<b>5.</b> Telephone number: (    )	
<b>6.</b> Name of current operator of this vessel				
<b>7.</b> In what waters does this vessel primarily operate? <input type="checkbox"/> Great Lakes – <i>Go to 8</i> <input type="checkbox"/> Coastal                      } <i>SKIP to 9</i> <input type="checkbox"/> Oceangoing                      } <i>to 9</i> <input type="checkbox"/> Other – <i>Specify</i> _____ } <i>SKIP to 9</i>				
<b>8.</b> Was this vessel fitted out after April 1, 2010? <input type="checkbox"/> Yes – <i>Go to 9</i> <input type="checkbox"/> No – <i>See note below</i> <b>Note: The Census Bureau does not require your crew to fill out the enclosed Shipboard Census Report (D-23) if fit out was after April 1, because they will be enumerated at home. Return this form in the accompanying envelope.</b>				
<b>9.</b> Was this vessel berthed in a port on April 1, 2010? <input type="checkbox"/> Yes – <i>Go to 10</i> <input type="checkbox"/> No – <i>SKIP to 11</i>				
<b>10.</b> What is the name of that port? (Complete 10a–10e)				
<b>a.</b> Name of pier or designated anchorage			<b>b.</b> Street name	
<b>c.</b> City		<b>d.</b> State or foreign country		<b>e.</b> ZIP Code
<b>NOTE: For Vessels berthed on April 1, 2010, SKIP to 13. For vessels that are not berthed on April 1, 2010, complete 11 through 13.</b>				
<b>11.</b> What was the name of the vessel's port of departure? (Complete 11a–11e)				
<b>a.</b> Name of pier or designated anchorage			<b>b.</b> Street name	
<b>c.</b> City		<b>d.</b> State or foreign country		<b>e.</b> ZIP Code
<b>12.</b> What was the name of the vessel's port of destination? (Complete 12a–12e)				
<b>a.</b> Name of pier or designated anchorage			<b>b.</b> Street name	
<b>c.</b> City		<b>d.</b> State or foreign country		<b>e.</b> ZIP Code
<b>13.</b> Enter the total number of returned Shipboard Census Report (D-23) here _____ →				
<b>14.</b> Remarks				
<b>CENSUS USE ONLY</b>	ST	CO	LCO	Block


# Appendix E: D-47(MIL) Census Location Report for Military Vessels

OMB No. 0607-0919-C: Approval Expires 12/31/2011

FORM <b>D-47(MIL)</b> (4-28-2009)	U.S. DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. CENSUS BUREAU			
<b>CENSUS LOCATION REPORT FOR MILITARY VESSELS</b> <b>2010 Census</b>				
<b>1.</b> Name of vessel				
<b>2.</b> Address of the vessel				
<b>3.</b> Person completing this report	<b>a.</b> Name			
	<b>b.</b> Title			
<b>4.</b> Vessel contact	<b>a.</b> Name			
	<b>b.</b> Telephone number – Include area code (      )			
<b>5.</b> What type of vessel is this?	<input type="checkbox"/> Navy <input type="checkbox"/> Coast Guard			
<b>6.</b> What was the name of your assigned homeport as of April 1, 2010? <i>Complete a through e</i>	<b>a.</b> Port name			
	<b>b.</b> Address – <i>Number and street</i>			
	<b>c.</b> City			
	<b>d.</b> State	<b>e.</b> ZIP Code		
<b>7.</b> Enter the number of personnel assigned to this vessel here. —————→				
<b>8.</b> Enter the total number of returned Shipboard Census Reports (D-23) here. —————→				
<b>6.</b> Remarks				
<b>CENSUS USE ONLY</b>	ST	CO	LCO	Block

U S C E N S U S B U R E A U

**Appendix F: D-46, Acknowledgement of Receipt of Shipboard Materials**

	U.S. DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. CENSUS BUREAU
ACKNOWLEDGMENT OF RECEIPT OF SHIPBOARD CENSUS MATERIALS	

<b>INSTRUCTION</b> – Immediately upon receipt, complete and return this form to the address below, or email the information for items 1–5 to <a href="mailto:leticia.anderson@census.gov">leticia.anderson@census.gov</a> .	
<b>1.</b> Date	<b>2.</b> Name of vessel
<b>3.</b> Type of vessel <input type="checkbox"/> Naval <input type="checkbox"/> Coast Guard <input type="checkbox"/> Civilian	
<b>4.</b> Vessel mailing address  _____ _____	
<b>5.</b> Did you receive enough Shipboard Census Reports (D-23) for everyone on board ship? <input type="checkbox"/> Yes <input type="checkbox"/> No – How many additional Shipboard Census Reports (D-23) do you need? Enter number. → <input style="width: 80px;" type="text"/>	

U S C E N S U S B U R E A U

FORM D-46 (3-24-2009)

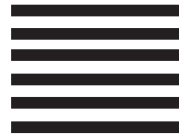
**U.S. Department of Commerce  
 Economics and Statistics Administration  
 U.S. Census Bureau**  
 National Processing Center  
 Jeffersonville IN 47190-7777



NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES
---

**D-46** (3-2009)

OFFICIAL BUSINESS  
 Penalty for Private Use \$300



BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 17162 WASHINGTON DC
POSTAGE WILL BE PAID BY US CENSUS BUREAU

CENSUS 2010  
 NATIONAL PROCESSING CENTER  
 PO BOX 5506  
 JEFFERSONVILLE IN 47199-5506



# Appendix G: D-34, Census Information for U.S. Flag Vessels

OMB No. 0607-0919-C: Approval Expires 12/31/2011

FORM <b>D-34</b> (3-4-2009)		U.S. DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. CENSUS BUREAU	
<h2>CENSUS INFORMATION FOR U.S. FLAG VESSELS</h2> <h3>2010 Census</h3>			
<b>INSTRUCTIONS</b> – Please complete this form for any ships that you own or operate that did not receive a package of materials.			
<b>SHIP NUMBER 1</b>			
1. Name of current operator		2. Telephone number (     )	
3. Name of ship		4. Crew size	
5. Ship mailing address Street (P.O. Box or Bldg. name)		City	State or foreign country    ZIP Code
<b>SHIP NUMBER 2</b>			
1. Name of current operator		2. Telephone number (     )	
3. Name of ship		4. Crew size	
5. Ship mailing address Street (P.O. Box or Bldg. name)		City	State or foreign country    ZIP Code
<b>SHIP NUMBER 3</b>			
1. Name of current operator		2. Telephone number (     )	
3. Name of ship		4. Crew size	
5. Ship mailing address Street (P.O. Box or Bldg. name)		City	State or foreign country    ZIP Code
<b>NOTE – This document may be photocopied if additional space is needed.</b>			
Page ____ of ____ pages			

## Appendix H: D-35(L), Reminder Letter

D-35(L)  
(5-2009)



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Economics and Statistics Administration**  
**U.S. Census Bureau**  
Washington, DC 20233-0001  
OFFICE OF THE DIRECTOR

FROM THE ACTING DIRECTOR  
U.S. CENSUS BUREAU

To: Owner/operators:

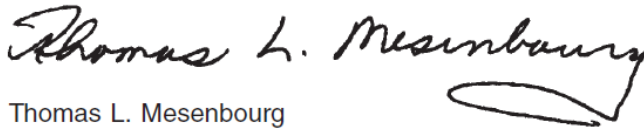
In February, the U.S. Census Bureau sent packages of census materials to you to be distributed to each ship owned or operated by you. We asked for your assistance in conducting the 2010 Census by helping obtain a count of all officers, crewmembers, and passengers aboard vessels that your company owns or operates as of Census Day, April 1, 2010.

Please encourage each shipmaster to return the completed census forms as soon as possible. The materials should be sent in the postage-paid envelope that was included in the package to the following address: U.S. Census Bureau, National Processing Center, Shipboard Processing, 1201 East 10th Street, Building 61G, Jeffersonville, IN 47132.

If you have any questions, please contact Ms. Leticia Anderson at (888) 595-1335 or <[npc.shipboard.enumeration@census.gov](mailto:npc.shipboard.enumeration@census.gov)>.

If all of your ships have returned the census forms to the Census Bureau, please disregard this notice. Thank you for helping ensure a complete and accurate count of the population in 2010.

Sincerely,

  
Thomas L. Mesenbourg

United States  
**Census**  
**2010**

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# Appendix I: D-20, Individual Census Report

OMB No. 0607-0919-C; Approval Expires 12/31/2011

United States  
**Census  
2010**

**Individual Census Report**

U.S. DEPARTMENT OF COMMERCE  
Economics and Statistics Administration  
U.S. CENSUS BUREAU

Use a blue or black pen.

**Start here**

**1. What is your name? Print name below.**

Last Name

First Name

MI

**2. What is your sex? Mark  ONE box.**

Male  Female

**3. What is your age and what is your date of birth?**

Please report babies as age 0 when the child is less than 1 year old.

Print numbers in boxes.

Age on April 1, 2010    Month    Day    Year of birth

--	--	--	--	--	--

→ NOTE: Please answer BOTH Question 4 about Hispanic origin and Question 5 about race. For this census, Hispanic origins are not races.

**4. Are you of Hispanic, Latino, or Spanish origin?**

- No, not of Hispanic, Latino, or Spanish origin
- Yes, Mexican, Mexican Am., Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, another Hispanic, Latino, or Spanish origin — Print origin, for example, Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on. ↗

**5. What is your race? Mark  one or more boxes.**

- White
- Black, African Am., or Negro
- American Indian or Alaska Native — Print name of enrolled or principal tribe. ↗

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Asian Indian  | <input type="checkbox"/> Japanese   | <input type="checkbox"/> Native Hawaiian       |
| <input type="checkbox"/> Chinese   | <input type="checkbox"/> Korean   | <input type="checkbox"/> Guamanian or Chamorro |
| <input type="checkbox"/> Filipino  | <input type="checkbox"/> Vietnamese   | <input type="checkbox"/> Samoan                |
| <input type="checkbox"/> Other Asian — Print race, for example, Hmong, Laotian, Thai, Pakistani, Cambodian, and so on. ↗ | <input type="checkbox"/> Other Pacific Islander — Print race, for example, Fijian, Tongan, and so on. ↗ |  |

- Some other race — Print race. ↗

**6. Do you live or stay in this facility MOST OF THE TIME?**

- Yes → This completes the form.
- No ↗

**7. (If No) What is the full address of the place where you live or stay MOST OF THE TIME?**

Please complete all that apply.

Street address number

Street name



Apartment number

Rural route address



City

County

State or foreign country

ZIP Code

Form **D-20** (3-17-2009)

U S C E N S U S B U R E A U







**UNITED STATES DEPARTMENT OF COMMERCE**  
**Economics and Statistics Administration**  
**U.S. Census Bureau**  
 Washington, DC 20233-0001  
 OFFICE OF THE DIRECTOR

March 17, 2010

A message from the Director, U.S. Census Bureau . . .

This is your official 2010 Census form. We need your help to count everyone in the United States. It is important that everyone be counted, regardless of where they may be living at the time of the census. This Individual Census Report is to be used to count people who are currently living or staying in group quarters, such as college or university dormitories, nursing homes, group homes, emergency and transitional shelters for people experiencing homelessness, and other such locations. **Please follow the instructions you were given when you received this form for returning it to the appropriate person.**

Your answers are important. Census results are used to decide the number of representatives each state has in the U.S. Congress. The amount of government money received also depends on these answers. That money is used for services for children and the elderly, roads, and many other local needs. As allowed by law, your census data becomes public after 72 years. This information can be used for family history and other types of historical research.

Your answers are confidential. This means the Census Bureau cannot give out information that identifies you. Your answers will only be used for statistical purposes, and no other purpose. Please visit our Web site at <[www.census.gov/2010census](http://www.census.gov/2010census)> and click on "Protecting Your Answers" to learn more about our privacy policy and data protection.



***Thank you for completing your official 2010 Census form.***

The U.S. Census Bureau estimates that, for the average respondent, this form will take about 5 minutes to complete, including the time for reviewing the instructions and answers. Send comments regarding this burden estimate or any other aspect of this burden to: Paperwork Reduction Project 0607-0919-C, U.S. Census Bureau, AMSD-3K138, 4600 Silver Hill Road, Washington, DC 20233. You may e-mail comments to <[Paperwork@census.gov](mailto:Paperwork@census.gov)>; use "Paperwork Project 0607-0919-C" as the subject.

Respondents are not required to respond to any information collection unless it displays a valid approval number from the Office of Management and Budget.

**FOR OFFICIAL USE ONLY**

**GQ Control Number**

**A. PN**

**B. JIC1**

**C. JIC2**

**D. Answered By:**  Respondent  Other



Attachment J: D-38 Maritime Promotional Poster

# All Hands on Deck!

Complete your Census form between  
April 1 and May 14, 2010.

**United States Census 2010**

**Shipboard Census Report**

Use a black or dark gray pen. **Start here**

- What is your vessel? (For name only)
 

Last Name: \_\_\_\_\_

First Name: \_\_\_\_\_
- What is your race? (Select 1, ONE race)
 

Male  Female
- What is your age and what is your date of birth?
 

Please report dates on age if after the 01st of June than 1 year old.

Age on April 1, 2010: \_\_\_\_\_

Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_
- Are you of Hispanic, Latino, or Spanish origin?
 

Hispanic, Latino, or Spanish origin — Please check one.

Yes, Mexican, Mexican Am., Chicano

Yes, Puerto Rican

Yes, Cuban

Yes, another Hispanic, Latino, or Spanish origin — Please print: \_\_\_\_\_
- What is your vessel? (Race or ethnic basis)
 

White

Black, African Am., or Negro

American Indian or Alaska Native — Please print or check the \_\_\_\_\_
- What is the name of the ship to which you are assigned?
 

\_\_\_\_\_
- What is the name of the operator of this vessel?
 

If U.S. Government operator, specify Navy, Coast Guard, etc. \_\_\_\_\_
- Do you have a house, apartment, or mobile home where you usually stay when off duty?
 

Yes, I do  No, I do not  (If "No," check "No, I do not.")

Asian Indian  Japanese  Korean  Other Asian — Print race in Spanish, Latin, Tagalog, and Vietnamese and in p. 2  
 Other Pacific Islander — Print race in Spanish, Latin, Tagalog, and Vietnamese and in p. 2  
 Some other race — Print race p. 2

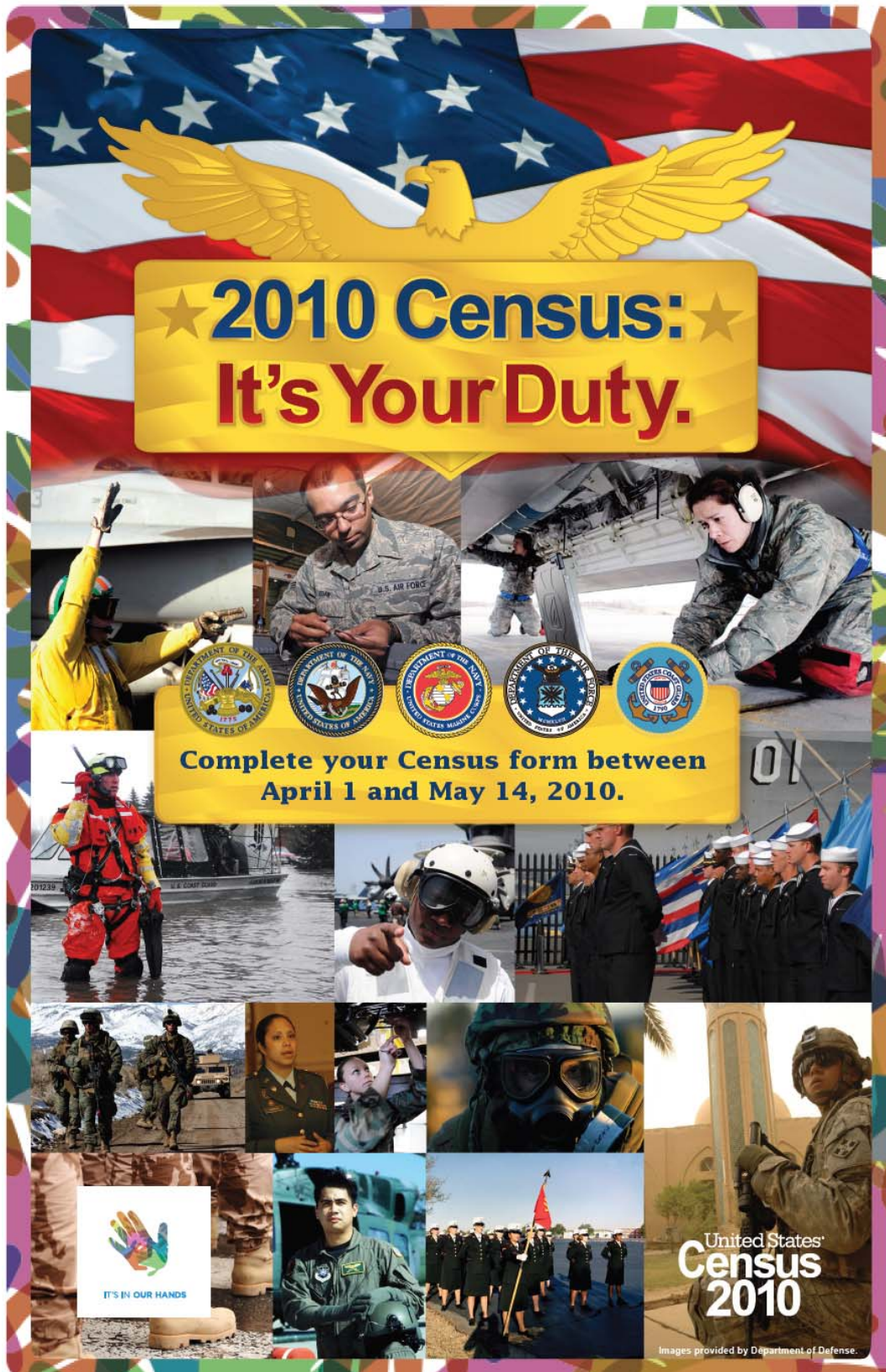
USCENSUSBUREAU Form D-38 (10-000)

**United States Census 2010**

**IT'S IN OUR HANDS**

D-38

Attachment K: D-39 Military Promotional Poster



D-39

## Attachment L: D-3278, Maritime Fact Sheet



IT'S IN OUR HANDS

# WHAT YOU NEED TO KNOW

## Navigating the Census:

### A Guide for Merchant Mariners and Their Onshore Advocates

Our goal for the 2010 Census is to make sure that everyone is counted. To help us in reaching that goal, the Census Bureau worked with the major maritime organizations to identify vessels in operation at the time of the 2010 Census—including factory trawlers, floating processors, tuna boats, and National Oceanic and Atmospheric Administration vessels.

#### Where Will You and Your Family Be Counted?

People in the United States will be counted at their usual residence, the place where they live and sleep most of the time. This place is not necessarily the same as the person's voting residence or legal residence. Determining usual residence is easy for most people—but it may not be so apparent for those who go to sea. Here are the rules:

- Crews of U.S. flag merchant vessels engaged in inland waterway transportation are counted at their usual onshore residence (the place where they live and sleep most of the time when they are onshore).
- Crews of U.S. flag merchant vessels docked in a U.S. port or sailing from one U.S. port to another U.S. port are counted at their usual onshore residence, if they report one (the place where they live and sleep most of the time when they are onshore) or they are counted on the vessel.

#### How Will You Receive Your Census Questionnaire?

If you have an onshore home in the United States, your census questionnaire will be delivered to you there AS WELL AS A SHIPBOARD CENSUS REPORT ON BOARD THE SHIP. Some of you will receive both an onshore census questionnaire and a Shipboard Census Report. Please complete both the standard census questionnaire and the Shipboard Census Report. When completing the Shipboard Census Report, make sure to write in the full address OF YOUR ONSHORE RESIDENCE IF you live or stay THERE most of the time.

#### The 2010 Census: Quick, Easy, and Confidential.

- 2010 Shipboard Census Reports contain 9 questions and are simple to fill out.
- By law, the Census Bureau cannot share an individual's census questionnaire responses with anyone, including other federal agencies and law enforcement entities.

U S C E N S U S B U R E A U

U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU

United States  
**Census**  
**2010**

## Your Participation Is Vital.

The U.S. Constitution directs the Census Bureau to conduct a complete count of all people living in the United States every 10 years. Census information helps in determining how federal, state, local, and tribal governments make decisions affecting the people of this country and how over \$400 billion per year of taxpayers' money is allocated by government. Participating in the census is in everyone's best interest. People who answer the census help their communities obtain state and federal funding for neighborhood improvements, such as deciding where to build schools, hospitals, and roads, or about services for the elderly, job training, and more. The best way to make sure people like yourself are counted in the census is to fill out the form and encourage others to do so.

By law, the Census Bureau cannot share individual answers it receives with anyone. Also, we do not share individual answers with welfare agencies, courts, police, or the military. Census workers are sworn to secrecy. The Census Bureau workforce understands the importance of safeguarding confidential data. They know that if they give out any information, they can face a \$250,000 fine and jail time.

For additional information about the 2010 Census, visit the Census Bureau's Internet site at <http://www.census.gov> or call one of our Regional Census Centers across the country:

Regional Census Center	Phone Number
Atlanta	404-335-1555
Boston	617-223-3700
Charlotte	704-936-5300
Chicago	312-454-2700
Dallas	214-267-6900
Denver	720-475-3640
Detroit	313-396-5200
Kansas City	816-994-2000
Los Angeles	818-717-6700
New York City	212-971-8810
Philadelphia	215-717-1020
Seattle	425-908-3000

D-3278

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Economics and Statistics Administration  
U.S. CENSUS BUREAU

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**Census**  
**2010**

## Attachment M: D-3277, Military Fact Sheet



# WHAT YOU NEED TO KNOW

## Sound Off for the 2010 Census: A Guide for U.S. Military Personnel

### Where Will You and Your Family Be Counted?

People in the United States will be counted at their usual residence, the place where they live and sleep most of the time. This place is not necessarily the same as the person's voting residence, legal residence, or permanent residence. Determining usual residence is easy for most people—but it may not be so apparent for people in the military and their families.

- U.S. military personnel residing in the United States are counted at the residence where they live and sleep most of the time. This residence might be on or off the military installation.
- Crews of military vessels with a U.S. homeport are counted at the onshore residence where they live and sleep most of the time. If they do not report an onshore residence, they are counted at their vessel's homeport.
- U.S. military personnel stationed outside the United States, including dependents living with them, will be counted as part of the U.S. overseas population using administrative records from the Department of Defense. These persons stationed overseas will be included in the state totals used to determine the allocation of seats in the U.S. House of Representatives. The military overseas population includes U.S. military personnel deployed for wartime efforts and U.S. military personnel on U.S. military vessels with a homeport outside the United States.

### An Overview of the 2010 Census for the Armed Forces.

Military installations in the United States appoint a project officer to work with the Local Census Office (LCO). The LCO trains base personnel, provides materials, and assists with any questions or problems during the census.

- Armed forces personnel, who live in military group quarters such as barracks/dormitories, disciplinary barracks/jails, or military treatment facilities, will be given a special census form called a Military Census Report (MCR). Personnel assigned to a military group quarter will be counted at the group quarter.
- U.S. military personnel on board Navy and Coast Guard vessels with a U.S. homeport will receive a Shipboard Census Report (SCR) to complete. If they have an onshore address, they can claim it as their home address. If not, they will be counted on board the ship at its homeport.
- People living in family housing on base in the United States will receive the standard census questionnaire through the mail.
- Vessel personnel, who also have an onshore address, will receive the standard census questionnaire at their home address AS WELL AS A SHIPBOARD CENSUS REPORT ON BOARD THE SHIP. Please complete both the standard census questionnaire and the Shipboard Census Report. When completing the Shipboard Census Report, make sure to write in the full address OF YOUR ONSHORE RESIDENCE IF you live or stay THERE most of the time.

U S C E N S U S B U R E A U

U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU

United States  
**Census**  
**2010**

## The 2010 Census: Quick, Easy, and Confidential.

- 2010 Military Census Reports contain 6 questions and are simple to fill out.
- By law, the Census Bureau cannot share an individual's census questionnaire responses with anyone, including other federal agencies and law enforcement entities.

## Your Participation Is Vital.

The U.S. Constitution directs the Census Bureau to conduct a complete count of all people living in the United States every 10 years. Census information helps in determining how federal, state, local, and tribal governments make decisions affecting the people of this country and how over \$400 billion per year of taxpayers' money is allocated by government. Participating in the census is in everyone's best interest. People who answer the census help their communities obtain state and federal funding for neighborhood improvements, such as deciding where to build schools, hospitals, and roads, or about services for the elderly, job training, and more. The best way to make sure people like yourself are counted in the census is to fill out the form and encourage others to do so.

By law, the Census Bureau cannot share individual answers it receives with anyone. Also, we do not share individual answers with welfare agencies, courts, police, or the military. Census workers are sworn to secrecy. The Census Bureau workforce understands the importance of safeguarding confidential data. They know that if they give out any information, they can face a \$250,000 fine and jail time.

For additional information about the 2010 Census, visit the Census Bureau's Internet site at <http://www.census.gov> or call one of our Regional Census Centers across the country:

Regional Census Center	Phone Number
Atlanta	404-335-1555
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Chicago	312-454-2700
Dallas	214-267-8900
Denver	720-475-3640
Detroit	313-396-5200
Kansas City	816-994-2000
Los Angeles	818-717-8700
New York City	212-671-8810
Philadelphia	215-717-1020
Seattle	425-908-3000

D-3277

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**2010**

## Attachment N: Geocoding Maritime Vessels for Census 2010



UNITED STATES DEPARTMENT OF COMMERCE  
Economics and Statistics Administration  
U.S. Census Bureau  
Washington, DC 20233-0001

SEP 23 2009

MEMORANDUM FOR David Hackbarth  
Chief, National Processing Center

Through: *Frank Vitrano*  
Chief, Decennial Management Division

From: Timothy Trainor *Acting*  
Chief, Geography Division

Subject: Geocoding Maritime Vessels for Census 2010

### I. Introduction

The term Crews of Vessels (CV) refers to the shipboard populations of U.S. Navy, U.S. Coast Guard, and merchant marine vessels. For Census 2010, operators will geocode and assign CVs to the land area containing the port or marina associated with the ship.

Information required to conduct the enumeration on military vessels was provided by the Department of Defense and the Department of Transportation. These departments provided the U.S. Census Bureau with lists of vessels, vessel mailing addresses, estimated personnel on board, and associated home ports. This list enables the Geography Division (GEO) to code military vessels to their appropriate Census 2010 collection geography. The GEO already has assigned each military CV to a 2010 collection block within the correct tabulation entity.

The major maritime associations send a list of maritime vessels to the Census Bureau. The Census Bureau includes all ocean-going, coastal, and Great Lakes ships in the maritime enumeration. Maritime vessels include factory trawlers, floating processors, tuna boats, National Oceanic and Atmospheric Administration vessels, and Military Sea Lift Command vessels. Census packets were sent to each maritime vessel and returned to the National Processing Center (NPC). The NPC geocodes each maritime vessel to the appropriate Census 2010 collection block within the correct entity.

The geocoding of military vessels and maritime vessels begins on April 5, 2010 and will continue through June 14, 2010.

### II. Geocoding Procedures

Review the D-47 (Census Location Report for Maritime Vessels - 2010 Census). An example of a D-47 is attached.

U S C E N S U S B U R E A U  
Helping You Make Informed Decisions • 1902-2002

www.census.gov



A. If the answer to question 9 (Was this vessel berthed in a port on April 1, 2010) is yes, refer to question 10 (What is the name of that port) to obtain the name of the port, street name, and ZIP Code at which the vessel is located. Once you know the address information listed in question 10, you must code the vessel to the nearest land block within the correct entity that corresponds to the port.

\* If no street name is found or provided, use the internet to obtain information on the port or marina. Locate a map of the port or marina on the internet or other source materials and use the information found on the map to determine the area in which the port or marina is located in the Search Utility Mapping Object (SUMO) application. Identify streets and landmarks on the internet map to help you identify the corresponding area in SUMO.

- Open SUMO. Enter State and click 'Switch State' button.
- Enter ZIP Code.
- Using 'Search Type' drop-down menu, set = Street Name.
- Enter Street Name and click 'Search' button.
- Determine the correct address range from the list below in the bottom half of the screen. Double click the correct address range. After the map refreshes, right-click the map.
- Determine the correct side of the street and click on the corresponding push-pin symbol. The pop-up box will provide the state Federal Information Processing Standards (FIPS) code, county FIPS code, and the 2010 collection block (Make sure the nearest land block is within the entity provided in question 10.).
- Write the state, county, and 2010 collection block number to which the vessel should be coded in the Census Use Only section of the D-47.
- Proceed to the next D-47.

B. If no port is listed, call the contact person by dialing the telephone number provided in question 5. If no telephone number is provided, contact Leticia Anderson by telephone at (812) 218-3991. If she can not provide a telephone number, write "unable to code" in the block number section of the Census Use Only section of the D-47. Proceed with the next D-47.

C. If the answer to question 9 (Was the vessel berthed in a port on April 1, 2010) is no, refer to question 11 (What was the name of the vessel's port of departure) to obtain the name of the port of departure, street name, and ZIP Code at which the vessel departed. Once you know the address information listed in question 11, you must code the vessel to the nearest land block within the correct entity that corresponds to the port of departure.

\* If no street name is found or provided, use the internet to obtain information on the port or marina. Locate a map of the port or marina on the internet or other source materials and use the information found on the map to determine the area in which the port or marina is located in SUMO. Identify streets and landmarks on the internet map to help you identify the corresponding area in SUMO.

- Open SUMO. Enter State and click 'Switch State' button.
- Enter ZIP Code.
- Using 'Search Type' drop-down menu, set = Street Name.
- Enter Street Name and click 'Search' button.
- Determine the correct address range from the list below in the bottom half of the screen. Double click the correct address range. After the map refreshes, right-click the map.
- Determine the correct side of the street and click on the corresponding push-pin symbol. The pop-up box will provide the state FIPS code, county FIPS code, and the 2010 collection block (Make sure the nearest land block is within the entity provided in question 10.).
- Write the state, county, and 2010 collection block number to which the vessel should be coded in the Census Use Only section of the D-47. Also, include the name of the marina or port from which the vessel departed.
- Proceed to the next D-47.

D. If the answer to question 9 (Was the vessel berthed in a port on April 1, 2010) is no, and no information is available on the port of departure, contact Leticia Anderson by telephone at (812) 218-3991. If she can not provide a telephone number, write "unable to code" in the block number section of the Census Use Only section of the D-47. Proceed with the next D-47.

E. If the berth, departure, or destination of the maritime vessel is a foreign port, do not geocode. Indicate this by writing "overseas" in the Census Use Only of the D-47.

Attachment (D-47)

## Attachment O: Shipboard Kit Details Final

Kit #	Kit Name	Form Number	Form Title	Projected Quantity	Units
23	Military Vessel Master Kit	D-46	Acknowledgement of Receipt of Shipboard Census Materials	1	each
23	Military Vessel Master Kit	D-47(MIL)	Military Vessel Location Report	1	each
23	Military Vessel Master Kit	D-39	Military Promotional Posters, for display	5	each
23	Military Vessel Master Kit	D-3277	Fact Sheets, for display	5	each
23A	Military Vessel Subkit A	D-23	Quantity of blank D-23 Shipboard Census Reports (SCR)	600	each
23A	Military Vessel Subkit A	D-40	Quantity of D-40 Confidentiality Envelopes (with Privacy Act verbiage)	600	each
23A	Military Vessel Subkit A	D-44	Enumeration Control by Division of U.S. Military Crews of Ships (1:100)	6	each
23A	Military Vessel Subkit A	D-49MIL	Quantity of D-49 Self-Enumeration Quick Reference Guides (1:25)	24	each
23A	Military Vessel Subkit A	Z1614B	Pencil, Black	600	each
23A	Military Vessel Subkit A	Z1903	Sharpener, Pocket, Pencil	600	each
23A	Military Vessel Subkit A	Z0525	Large (12 X 12 X 5½) return USPS Priority Mail package w/BRM label (1:220)	3	each
23A	Military Vessel Subkit A	Z2011	Roll Filament Strapping Tape 2" x 60yds	1	each
23B	Military Vessel Subkit B	D-23	Quantity of blank D-23 Shipboard Census Reports (SCR)	100	each
23B	Military Vessel Subkit B	D-40	Quantity of D-40 Confidentiality Envelopes (with Privacy Act verbiage)	100	each
23B	Military Vessel Subkit B	D-44	Enumeration Control by Division of U.S. Military Crews of Ships (1:100)	1	each
23B	Military Vessel Subkit B	D-49MIL	Quantity of D-49 Self-Enumeration Quick Reference Guides (1:25)	4	each
23B	Military Vessel Subkit B	Z1614B	Pencil, Black	100	each
23B	Military Vessel Subkit B	Z1903	Sharpener, Pocket, Pencil	100	each
23B	Military Vessel Subkit B	Z0520	Tyvek return envelope with USPS Priority Mail stickers and BRM label (1:50)	2	each
23C	Navy Letter of Support	Z12-Navy	Navy Letter of Support	1	each
23D	USCG Letter of Support	Z12-USCG	USCG Letter of Support	1	each
47	Maritime Vessel Master Kit	D-46	Acknowledgement of Receipt of Shipboard Census Materials	1	each
47	Maritime Vessel Master Kit	D-47 (MAR)	Maritime Vessel Location Report	1	each
47	Maritime Vessel Master Kit	D-38	Maritime Promotional Posters, for display	1	each
47	Maritime Vessel Master Kit	D-3278	Fact Sheets, for display	1	each
47A	Maritime Vessel Subkit A	D-23	Quantity of blank D-23 Shipboard Census Reports (SCR)	50	each
47A	Maritime Vessel Subkit A	D-40	Quantity of D-40 Confidentiality Envelopes (with Privacy Act verbiage)	50	each
47A	Maritime Vessel Subkit A	D-49MAR	Quantity of D-49 Self-Enumeration Quick Reference	2	each

	Subkit A		Guides (1:25)		
47A	Maritime Vessel Subkit A	Z1614B	Pencil, Black	50	each
47A	Maritime Vessel Subkit A	Z1903	Sharpener, Pocket, Pencil	50	each
47A	Maritime Vessel Subkit A	Z0520	Tyvek return envelope with USPS Priority Mail stickers and BRM label (1:50)	1	each
47B	Maritime Vessel Subkit B	D-23	Quantity of blank D-23 Shipboard Census Reports (SCR)	10	each
47B	Maritime Vessel Subkit B	D-40	Quantity of D-40 Confidentiality Envelopes (with Privacy Act verbiage)	10	each
47B	Maritime Vessel Subkit B	D-49MAR	Quantity of D-49 Self-Enumeration Quick Reference Guides (1:25)	1	each
47B	Maritime Vessel Subkit B	Z1614B	Pencil, Black	10	each
47B	Maritime Vessel Subkit B	Z1903	Sharpener, Pocket, Pencil	10	each
47B	Maritime Vessel Subkit B	Z0520	Tyvek return envelope with USPS Priority Mail stickers and BRM label (1:50)	1	each
34	Operator Kit	D-34	Census 2010 Information for U.S. Flag Vessels form	1	each
34	Operator Kit	D-38	Maritime Promotional Posters, for display	1	each
34	Operator Kit	D-3278	Fact Sheets, for display	1	each
34	Operator Kit	D-48(L)	Letter to Ship's Operator from the Census Bureau Director	1	each
34	Operator Kit	Z0511	Postage-Paid Return Envelope with NPC address label	1	each

## **Attachment P: Lessons Learned for the 2010 Shipboard Enumeration Operation**

### **Lessons Learned for the 2010 Census Shipboard Enumeration Operation**

#### **Requirements**

- a. None.

#### **Schedule**

- a. None.

#### **Owner/Operator vessel list creation**

- b. Begin relationships with the owner/operators no later than November 2018 for the 2020 Census. We started 1 year in advance for 2010.
- c. Attempt to get a second contact with the MARAD. The 2010 primary contact was on travel a lot.
- d. Have the Military Sealift Command included in the Census Joint Service Working Group meeting, to give them better understanding of the importance of the Census.
- e. Set up a Maritime Operator Working Group meeting so that we can provide updates and answer questions for the agencies.

#### **Mailout/Kit Prep**

- a. Do not mail to U.S. Navy vessels assigned to a foreign homeport.
- b. The U.S. Navy said that we mailed the materials out too soon. We could have received better results if we mailed the materials out closer to April 1. (Note: Prior to the operation the U.S. Navy specifically said that we should mail the materials out in late January or early February. This would give the materials time to reach the vessels that were on deployment. We asked the U.S. Navy for a list of vessels that were on deployment so that we could prioritize our shipping but they said that deployment was sensitive data and could not be released due to national security.)
- c. Send letter out to owner/operators providing criteria for vessel to be included in the Census. This could lower the number of vessels that we mail out to and could also reduce the number of follow-ups needed.
- d. Generic subkits worked well in saving time and money and are recommended for 2020.
- e. If possible, mail directly to the vessels instead of operators.
- f. Use the U.S. Postal Service. FedEx cannot deliver to military vessels.

#### **Vessel Instructions**

- a. Provide examples of completed materials along with the instructions, specifically the SCR and the Form D-47, Census Location Report.
- b. State that questionnaire should be completed in blue and black ink on the SCR.
- c. Shipboard Mail Box and 1-800 number helped in having people answer questions. Stress e-mail more in the instructions. Keep these instructions consistent. Have only e-mail and phone number in all forms sent to the vessel.

## **Materials**

- a. Provide an instruction on the Form D-40, Confidentiality Envelope that tells the individual that the envelope should not be mailed, but handed to the Project Officer of the vessel.
- b. Return mail packing materials need to have 2010 Census written on it in big letters so that the vessels do not mistake the materials for something else.
- c. Print the Form D-47, Census Location Report on PINK paper so that it will stand out.
- d. Add a line on the Form D-47MIL, Census Location Report for Military Vessels for all vessels to provide a pier location or pier left from if at sea on the form. This is extremely important for San Diego based vessels.
- e. Include vessel address on the SCR so that we are not entirely reliant on the Form D-47, Census Location Report.

## **Procedures**

- a. Some submarine crews have 2 crews, Blue and Gold. Only one crew should be counted and that crew should be the one that was on the submarine on April 1.
- b. Some vessels, such as submarines are out of communication for extended periods of time for mission requirements. Identify business rules in advance as to how these vessels should be counted.
- c. Reporting became particularly difficult with military vessels reporting late. Develop specific business rules for what is considered a complete case, when the case needs to be completed and options in case the vessel is unable to provide complete information or is unable to meet the required deadlines.
- d. Have all occupants, including Marines, on the vessel complete the SCR.

## **Automated Tracking and Control System**

- a. Manage mailing universe through an electronic system, instead of managing via Excel spreadsheets.
- b. Develop the ATAC system earlier in the process. Have both the port of departure and port of destination keyed in.
- c. Program the ATAC so that it provides reports by maritime agency. The *Shipboard Tracking Report* was generated and maintained by the DMD using an Excel spreadsheet that was updated based on data provided by the *D-47 Check In Report* and emails from the NPC.
- d. Enter data into the ATAC for vessels that are determined to be out-of-scope with the reason why the vessel was out-of-scope and which agency the vessel was linked to. These data should then produce a report similar to the *Address and Delete Tracker Report*, which was generated and maintained by the DMD using an Excel spreadsheet based on information gathered from phone calls and e-mails.

## Geocoding

- a. Have the Census Bureau Headquarters enter the geocode information for the military vessels, since the Census Bureau Headquarters acquires the geocodes from the GEO. This will lower the geocode burden on the clerical geocoding staff at the NPC.
- b. All vessels (military and maritime) need to be geocoded to the state, county, collection block and Census tabulation block level.
- c. Maps showing the selected collection block and tabulation block should be shown to the U.S. Navy and U.S. Coast Guard representatives for each of the military homeports.

## Residency Rules

- a. Representatives from the Maritime Administration (MARAD) expressed concern that the residency rule does not allow respondents on U.S. flag ships that fall into section 9.3 of the residency rules to be counted in the Census. According to the MARAD, 66 percent of their vessels fall into the last part of the category above. They also stated that these ships are considered U.S. soil and the respondents are required to pay federal taxes.

**Section 9.3** of the residency rules state - Crews of U.S. flag maritime/merchant vessels on Census Day docked in a foreign port, sailing from one foreign port to another foreign port, sailing from a U.S. port to a foreign port, or sailing from a foreign port to a U.S. port - **Not enumerated or counted in the census**

The MARAD gave the following reasons for changing the residency rule for foreign vessels;

- a. Vessels have crewmembers who pay federal taxes
- b. Are considered U.S. soil
- c. Vessel's regular route may be Boston – Miami- Costa Rica – Boston: why do we only count the U.S. to U.S. portion of the trip?
- d. Vessel is U.S. owned and operated

For the 2010 Census, vessels sailing to or from a foreign port were not counted (see examples below).

Vessel sailing from Miami to Costa Rica – not counted in Census  
Vessel sailing from Costa Rica to Miami – not counted in Census  
Vessel docked in Costa Rica on Census Day, but sailed to or will sail to Miami – not counted in Census

The MARAD wanted all of the vessels in the scenarios above counted in the Census.

**Other**

- a. Create a shared drive between the Census Bureau Headquarters and the NPC.
- b. Weekly meetings with the Shipboard Team proved helpful in maintaining communication between the Shipboard Team stakeholders. These weekly meetings also provided a means for making quick and informed decisions for a unique operation that is only conducted once every ten years.
- c. In the future if the Census Bureau purchases Seaweb, make sure the tracking component is also purchased. This would have helped with the geocoding and also with the mail-outs. Seaweb is a website that provides general information of vessels and tracks the location of the vessels.



## Attachment Q: Budget and Actual Cost for 2010 Census Shipboard Enumeration

Military Maritime							
Week Ending	Hours	Direct Salaries	Salaries w/Applications	Other Objects	Cumulative Expended	Budget	Percent Expended
thru 04/03	651	\$ 14,174.25	\$ 19,985.69	\$ 56,018.00	\$ 76,003.69	422405	18%
4/10/2010	57.5	\$ 1,013.12	\$ 1,428.50		\$ 77,432.19	422405	18%
4/17/2010	56	\$ 1,057.99	\$ 1,491.77		\$ 78,923.96	422405	19%
4/24/2010	126.25	\$ 2,098.33	\$ 2,958.65		\$ 81,882.60	422405	19%
5/1/2010	51.25	\$ 1,046.54	\$ 1,475.62		\$ 83,358.22	422405	20%
5/8/2010	125	\$ 2,072.45	\$ 2,922.15	\$ 15,320.00	\$ 101,600.38	422405	24%
5/15/2010	100.5	\$ 1,808.11	\$ 2,549.44		\$ 104,149.81	422405	25%
5/22/2010	98.75	\$ 1,507.99	\$ 2,126.27		\$ 106,276.08	422405	25%
5/29/2010	81.25	\$ 1,406.23	\$ 1,982.78		\$ 108,258.86	422405	26%
6/5/2010	42	\$ 660.45	\$ 931.23		\$ 109,190.10	422405	26%
6/12/2010	117.75	\$ 1,690.52	\$ 2,383.63		\$ 111,573.73	422405	26%
6/19/2010	110	\$ 1,816.30	\$ 2,560.98		\$ 114,134.71	422405	27%
6/26/2010	42.5	\$ 847.72	\$ 1,195.29		\$ 115,330.00	422405	27%
7/3/2010	9.5	\$ 238.91	\$ 336.86	\$ 1,662.00	\$ 117,328.86	422405	28%
7/10/2010	50	\$ 1,201.59	\$ 1,694.24		\$ 119,023.11	422405	28%
7/17/2010	45	\$ 1,124.53	\$ 1,585.59		\$ 120,608.69	422405	29%
7/24/2010	18	\$ 528.12	\$ 744.65		\$ 121,353.34	422405	29%
7/31/2010	9	\$ 264.06	\$ 372.32		\$ 121,725.67	422405	29%
8/7/2010	2	\$ 26.82	\$ 37.82	\$ 6,140.00	\$ 127,903.48	422405	30%
8/14/2010	10	\$ 293.40	\$ 413.69		\$ 128,317.18	422405	30%