

PRELIMINARY RESULTS FROM THE LIST/ENUMERATE AND REMOTE ALASKA OPERATIONS FOR CENSUS 2000

Kevin J. Zajac, U.S. Census Bureau*

Kevin J. Zajac, U.S. Census Bureau, Rm 2501, Bldg 2, Washington DC 20233

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Introduction

List/Enumerate (L/E) and Remote Alaska (RA) are Census 2000 operations conducted in sparsely populated areas of the country. The purpose of these two similar operations was to enumerate housing units which lack residential mail delivery by the United States Postal Service (USPS). L/E and RA are carried out in the extremely challenging rural areas of the country. The RA operation specifically takes place in parts of Alaska that are often only accessible by unconventional methods. Both L/E and RA are all-in-one operations, meaning the address list creation is done concurrently with the enumeration. This paper will report some of the results that were found from the L/E and RA operations.

Background

Census 2000 used several different operations throughout the country to enumerate the population. The type of operation chosen for specific areas depended on many factors, including weather, terrain, housing unit density, and accessibility. Two of the operations used were List/Enumerate and Remote Alaska, which is a modified form of L/E. Both L/E and RA are conducted in some of the more remote areas of the United States where many of the housing units are not accessible by the USPS. Census enumerators are assigned areas and are given census maps for these areas. The job of the enumerator is to list addresses within their area on blank address register pages, map spot¹ the addresses on census maps, and conduct an interview to collect census information for each housing unit. The information is collected on either a short or long census form. A designation on the address register determines when an enumerator should collect long form data for the housing unit. For L/E, automobiles are generally used because there is normally a considerable distance between housing units in these areas. The L/E operation started in mid-March, 2000, and ended at the beginning of May, 2000.

Enumeration of the remote areas is a unique feature of the Census 2000 Alaska enumeration. About two hundred

villages comprise the area being covered by the RA operation. The duties of an enumerator for this operation are still the same - list the addresses, map spot the addresses on maps, and conduct interviews. However, a major difference is that roads rarely exist to link the widely scattered villages and communities in Alaska. Many of these areas are accessible only by small plane, snowmobile, four-wheel drive vehicles, dogsleds, or a combination thereof. Villages may typically contain from only a few persons to a few hundred persons, with a few of the larger cities having significantly more residents. Because ground conditions are more stable in the winter months than during the traditional Census enumeration period, enumeration for RA was performed in waves starting in mid-January, 2000. The final wave of the operation ended in mid-April, 2000.

Methodology

Addresses enumerated during the L/E and RA operations of Census 2000 were placed into a census address file called the Master Address File (MAF). This file is used as the foundation for the analysis done in this paper. The MAF is a compiled inventory of all addresses in the United States and is the equivalent of a corporate address file for use only by the Census Bureau. Numerous other census-related operations contribute to this inventory, as well as address files obtained from the USPS called Delivery Sequence Files (DSFs). Due to the fact that the MAF brings together address information from so many sources, an address is often represented in different ways on the file. One housing unit can therefore have several addresses associated with it. For this reason, guidelines are used to determine the eligibility of an address on the MAF to be included in the census count.

Although the L/E and RA are very similar operations, we will analyze them separately. We address several questions in this paper dealing with the L/E and RA operations for Census 2000:

- How many addresses collected from the L/E and RA operations were included in the census?
- What were some characteristics of these L/E and RA addresses?
- How often did these addresses match to a DSF?
- What were some of characteristics of the addresses that match to a DSF?

Address information collected by enumerators during the L/E and RA operations can widely vary from one housing unit to another. Addresses from these operations

¹ An enumerator places a dot on a census map to show the location of one or more living quarters. The enumerator assigns a number, unique within the census block, to each map spot to correspond to the entry in the address register for a basic street address or residential structure.

were grouped into three separate types - city style addresses, rural route addresses, and post office box addresses. The best type of address we can collect is a complete city style address. City style addresses are housing units that have a house number and street name associated with it (ex. - 123 Main Street). This type of address provides us with the best chance of locating the address on the ground if the unit needs to be found later. If an address wasn't a complete city style address, we checked to see if there was a complete rural route address available. Rural route addresses are housing units that only have a USPS mail carrier route number, also known as a rural route number, associated with it (ex. - RR #7, Box 5). If we didn't have a complete city style or complete rural route address, we checked for a complete post office box address. Post office box, or P.O. box, addresses are housing units that receive their mail in a numbered mailbox at the post office (ex. - P.O. Box 227). These type of addresses do not help us locate the housing unit on the ground. If an address has none of the three types of complete addresses, we check to see if there is incomplete address information collected. As well, there is sometimes no address information collected for a housing unit. Any of these types of addresses can have a location description. This location description is especially useful when we have something other than a complete city style address.

Housing units enumerated during L/E and RA were to be distinguished on census maps by enumerators using map spots. These are dots on the maps used to give the approximate location of each housing unit. Each dot has a number associated with it to correspond to the housing unit listed in the address register. If a map spot in an enumerator's assigned area was unique, the housing unit had a valid map spot. Map spots are used so that housing unit addresses can be located in the future.

Every housing unit in the L/E and RA operations has an address that helps determine the type of structure the unit is in. A housing unit can either be a single unit structure or a multi-unit structure depending on the basic street address of the unit. A basic street address is equivalent to the "core" of a housing unit address, which is the house number and street name. A housing unit with a unique basic street address is considered to be a single unit structure. If a basic street address has more than one unit associated with it, the housing unit resides in a multi-unit structure. Apartments are common multi-unit structures because they often have the same basic street address, but then also associated apartment numbers.

Results of the List/Enumerate Operation

Table 1 shows L/E addresses included in the census by address type. A total of 392,235 L/E addresses were

included in the census. Of these, 198,454 (50.6 percent) were complete city style type addresses. The remaining 193,781 addresses are generally more difficult to locate for future purposes because they do not have complete city style type addresses. However, of these remaining addresses, 168,976 (87.2 percent) had a location description.

Table 2 displays L/E addresses included in the census by map spot status. Of the 392,235 addresses, there were 385,161 addresses (98.2 percent) that had a valid map spot. The 7,074 remaining addresses (1.8 percent) did not have a valid map spot.

Table 3 shows L/E addresses included in the census by type of structure. Single unit structures represented 91.6 percent of the 392,235 addresses. This amounts to 359,185 addresses. The remaining 33,050 addresses (8.4 percent) were a part of multi-unit structures.

Table 4 reflects L/E addresses included in the census that match to a DSF. A total of 70,877 addresses were DSF matches. This accounts for 18.1 percent of all L/E addresses. The remaining 321,358 addresses (81.9 percent) did not match to the USPS address files.

Table 5 shows DSF matches by type of structure. Of the 70,877 addresses that matched to a DSF, 59,205 addresses (83.5 percent) were single unit structures. The remaining 16.5 percent of the DSF matched addresses were in multi-unit structures.

Table 6 displays the percent of addresses per block that match to a DSF. There were a total of 47,912 blocks in L/E that had at least one address included in the census. Of these blocks, 2,241 had complete (100%) agreement with an address on a DSF. That is, all addresses in each of these blocks matched to the USPS address files. In these 2,241 blocks, there were 5,774 addresses matching to a DSF. This represents 8.1 percent of the 70,877 DSF matched addresses and 1.5 percent of all 392,235 addresses included in the census.

Results of the Remote Alaska Operation

Table 7 shows RA addresses included in the census by address type. There were a total of 27,002 RA addresses included in the census. Of these, 5,401 (20 percent) that had a complete city style address. Of the remaining 21,601 non-complete city style addresses, 21,235 (98.3 percent) had a location description. Additionally, addresses with no information accounted for 10,358 (38.4 percent) of all addresses collected during RA. However, of these addresses with no information, 99.3 percent had a location description.

Table 8 reflects RA addresses included in the census by map spot status. Out of the 27,002 RA addresses, 26,870 (99.5 percent) had a valid map spot. The remaining 132 addresses had no valid map spot.

Table 9 shows RA addresses included in the census by type of structure. About 94 percent of all RA addresses included in the census were single unit structures. This represents a total of 25,379 of the 27,002 RA addresses. The remaining 1,623 addresses (6 percent) were a part of multi-unit structures.

Of the 27,002 RA addresses in the census, there were no addresses that matched to a USPS address on a DSF.

Conclusions

A total of 392,235 L/E addresses were included in the census. A majority of these addresses were quality addresses that we will be able to locate in the future. Just over 50 percent of the addresses included in the census were complete city style addresses. Of the remaining non-complete city style addresses, a large portion had a location description which help us to locate the unit. In addition, over 98 percent of the 392,235 addresses had valid map spots. The operation was also successful in targeting areas to use the L/E methodology. Out of 47,912 L/E blocks with at least one housing unit, only 2,241 blocks (4.7 percent) had total agreement with addresses from a DSF. In these 2,241 blocks that had total agreement to a DSF, there were 5,774 addresses. These addresses represent only 1.5 percent of the 392,235 L/E addresses included in the census.

The RA operation accounted for 27,002 addresses included in the census. Similar to the L/E operation, most of the RA addresses were quality addresses that we will

likely be able to locate in the future. About 20 percent of these addresses were complete city style addresses. Of the non-complete city style addresses, over 98 percent had a location description. Additionally, 99.5 percent of all RA addresses had valid map spots.

References

Walker, S. (2000). "Program Master Plan: Census 2000 List/Enumerate and Program Master Plan." Internal Census Memorandum, March 2, 2000.

Walker, S. (2000). "Program Master Plan: Census 2000 Remote Alaska and Program Master Plan." Internal Census Memorandum, March 8, 2000.

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Table 1. List/Enumerate Addresses Included in the Census by Address Type

Address Type	# of Addresses	% of Total
TOTAL	392,235	100.0
with location description	201,907	51.5
without location description	190,328	48.5
Complete City Style Address	198,454	50.6
with location description	32,931	8.4
without location description	165,523	42.2
Complete Rural Route Address	34,548	8.8
with location description	32,695	8.3
without location description	1,853	0.5
Complete Post Office Box Address	37,170	9.5
with location description	33,515	8.5
without location description	3,655	0.9
Incomplete Address (any of the 3)	12,282	3.1
with location description	6,155	1.6
without location description	6,127	1.6
No Address Information	109,781	28.0
with location description	96,611	24.6
without location description	13,170	3.4

Table 2. List/Enumerate Addresses Included in the Census by Map Spot Status

Map Spot Status	# of Addresses	% of Addresses
TOTAL	392,235	100.0
Valid Map Spot Exists	385,161	98.2
No Valid Map Spot Exists	7,074	1.8

Table 3. List/Enumerate Addresses Included in the Census by Type of Structure

Type of Structure	# of Addresses	% of Addresses
TOTAL	392,235	100.0
Single	359,185	91.6
Multi-Unit	33,050	8.4

Table 4. List/Enumerate Addresses Matching to a Delivery Sequence File

DSF Status	# of Addresses	% of Addresses
TOTAL	392,235	100.0
Matches	70,877	18.1
Does Not Match	321,358	81.9

Table 5. Delivery Sequence File Matches by Type of Structure

Type of Structure	# of Addresses	% of Addresses
TOTAL	70,877	100.0
Single	59,205	83.5
Multi-Unit	11,672	16.5

Table 6. Percent of Addresses per Block Matching to a Delivery Sequence File

% of DSF Addresses per Block	# of Blocks	# of DSF Matched Addresses	% of DSF Matched Addresses
TOTAL	47,912	70,877	100.0
100%	2,241	5,774	8.1
95-99%	51	1,727	2.4
90-94%	187	6,201	8.7
60-89%	2,236	32,490	45.8
30-59%	2,930	18,088	25.5
0-29% [†]	40,267	6,597	9.3

[†] There are some blocks with no DSF matching addresses.

Table 7. Remote Alaska Addresses Included in the Census by Address Type

Address Type	# of Addresses	% of Total
TOTAL	27,002	100.0
with location description	22,123	81.9
without location description	4,879	18.1
Complete City Style Address	5,401	20.0
with location description	888	3.3
without location description	4,513	16.7
Complete Rural Route Address	229	0.8
with location description	227	0.8
without location description	2	<0.1
Complete Post Office Box Address	10,767	39.9
with location description	10,588	39.2
without location description	179	0.7
Incomplete Address (any of the 3)	247	0.9
with location description	135	0.5
without location description	112	0.4
No Address Information	10,358	38.4
with location description	10,285	38.1
without location description	73	0.3

Table 8. Remote Alaska Addresses Included in the Census by Map Spot Status

Map Spot Status	# of Addresses	% of Addresses
TOTAL	27,002	100.0
Valid Map Spot Exists	26,870	99.5
No Valid Map Spot Exists	132	0.5

Table 9. Remote Alaska Addresses Included in the Census by Type of Structure

Type of Structure	# of Addresses	% of Addresses
TOTAL	27,002	100.0
Single	25,379	94.0
Multi-Unit	1,623	6.0