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P.L. 94-171 Redistricting Data From the Year 2000 Census

> The View From the States

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

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The View From the States



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The View From the States

Report of the 1990 Census Public Law 94-171 Program Evaluation Conferences

Chapter 1. Background

In a country as sprawling and diverse as ours, the 10-year census serves many purposes. Community groups use the numbers to plan services for the elderly and homeless. Housing analysts and realtors use the data to track the market for homes. Businesses use them to market products to meet consumer needs.

But, the single most important function of the census is political with a small "p": to allot seats in Congress and provide our State and local governments the population counts with which to redraw legislative districts.

In 1974, the National Legislative Conference (now the National Conference of State Legislatures) issued an urgent call to Congress. In "Improving the 1980 Census," they said: "Let State governments define small census tabulation areas to coincide with the boundaries of local election precincts (i.e., polling areas). Pass legislation requiring the Census Bureau to give us a role in this process."

During 1975 hearings before the U.S. House Census and Population Subcommittee, State legislatures stressed their need for a 100-percent count of the population for individual precincts and for other geographically detailed population figures. Such counts were needed to create State house and senate districts, as well as new congressional districts, early in the year following each decennial census.

Election precincts can range from one city block to a combination of several contiguous census "blocks." States asked to receive head counts for each block and local precinct, or "voting district" (VTD). Blocks provide the flexibility legislators need to create dozens of redistricting alternatives in order to find the "one plan" that is politically acceptable and that meets the standards of the U.S. Supreme Court requiring population equity across districts.

Redistricting officials pointed out that they must "trade" individual blocks and precincts between proposed legislative districts to balance population, achieve legally required racial and ethnic balance, and make political compromises to ensure enactment of plans in time for statewide elections.

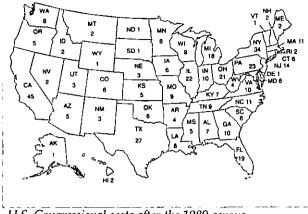
Most States have constitutional or court-imposed deadlines to complete this sensitive and technically complex task within the year after the Census Day (April 1). Over two-thirds of the States were required to redistrict within 12 months of Census Day, April 1, 1990.

States also requested race and voting-age census counts for each of these small building blocks (census blocks and VTD's) to ensure that they could cumulate different combinations to achieve a racial balance that would be consistent with the provisions of the Voting Rights Act (sections 2 and 5).

Before Congress passed House Resolution 1753 and President Ford signed it as Public Law 94-171 in late 1975 (see appendix A), the Census Bureau had begun to work with the Reapportionment Committee of the National Legislative Conference and State officials to find a way to provide these block and precinct head counts from the 1980 census.

The 1980 census was the first in which P.L. 94-171 took effect. After this census, States for the first time received special block and election precinct population counts within a year of Census Day.

That partnership has grown over 20 years. In the 1980's, technology played a new role in census planning. Using U.S. Geological Survey base maps, the Census Bureau developed an automated geographic reference file—a computerized map of the United States—called "TIGER" (Topologically Integrated Geographic Encoding and Referencing). For the first time, the Census Bureau had the ability to assign block numbers nationwide. This resulted in Representation in the 1980's and the 1990's



U.S. Congressional seats after the 1980 census.

7 million 1990 census blocks for which data were tabulated.

The 1990 Redistricting Data Program gave States a say in defining the boundaries of census blocks since census blocks could serve as the building unit in the redistricting process. The program was divided into three phases:

- Phase 1 (1985)—The Block Boundary Suggestion Project (BBSP). States suggested visible features to be used as census block boundaries and ultimately as voting district boundaries.
- Phase 2 (1989)—Voting District (VTD) Project. States delineated voting district boundaries on census maps.
- Phase 3 (January 14, 1991-March 8, 1991)— Census Bureau delivered P.L. 94-171 data for State governments.

For the 1990 census, the Census Bureau supplied 100-percent counts of population, race, Hispanic origin, and voting age for each of 7 million blocks and approximately 150,000 small election precincts to all 50 State legislatures weeks ahead of the April 1, 1991, deadline required by the Census Law, Title 13, U.S. Code. Pages 12-13 show examples of the data. (See appendix B for a list of official recipients.)

Technology had another impact on redistricting. The Census Bureau delivered the redistricting data in several media—in printout and on computer tape as in 1980—and for the first time on compact disc (CD-ROM). Having the data and the TIGER files on compact disc "democratized" redistricting and



U.S. Congressional seats after the 1990 census.

thus allowed anyone with a microcomputer to manipulate the data graphically to construct a redistricting plan.

A 1987 New York Times article quoted Marshall Turner, chief of the Census Redistricting Data Office, as saying, "the technology that is evolving will result in an ever-broadening number of stakeholders participating in the redistricting debate . . . the process is going to be much more crowded."

Figure 1.

1990 Census Redistricting Data Program: Customer Feedback

(These statistics reflect responses from 43 of the 46 States that participated in the 1990 Census P.L. 94-171 Program.)

Service	Total	Very Pleased	Satisfied	Dissatisfied
Timeliness	100%	51%	47%	2%
Accuracy	100%	64%	34%	2%
Responsiveness	100%	70%	30%	_
Courtesy	100%	77%	23%	-
		Very		
Product	Total	Pleased	Satisfied	Dissatisfied
Content	100%	49%	49%	2%
Structure	100%	49%	45%	6%
Destructure	1000	37%	60%	2%
Documentation	100%	SI 70	0070	
Documentation Packaging	100%	57 % 58%	42%	-/~
Packaging				 2%
	100%	58%	42%	

(Appendix C lists software vendors able to provide services regarding redistricting data.)

Now having worked with the 1990 counts in their redistricting activities, States are looking toward the next census—in 2000—with some definite ideas about the data they need. To help us prepare for the next census, we asked States to ruminate on their experiences with the 1990 data and to offer suggestions for future improvements.

Evaluating the 1990 Census Redistricting Data Program

In late 1991, the Census Bureau's Redistricting Data Office asked each Governor and the majority and minority leaders of each State legislature and their key staff members to provide comments on the 1990 Census Redistricting Data Program. We also asked them for suggestions about the P.L. 94-171 Program for Census 2000. The first comments were discussed at a May 1992 meeting of the National Conference of State Legislatures (NCSL) Reapportionment Task Force in Kansas City, Missouri.

These experiences were then refined at a conference held by the NCSL Reapportionment Task Force at the 1992 annual meeting in Cincinnati, Ohio.

After the Cincinnati meeting, the report of the Program Evaluation Conference was distributed to task force members and other individuals who expressed an interest in its work. On November 14, 1992, the NCSL Reapportionment Task Force finalized their recommendations in Raleigh, North Carolina.

This report summarizes State recommendations to date—especially those made at the 1992 annual meeting. The States and the Census Bureau will hold a final review of this information at the 1993 annual meeting of the NCSL.



State legislators gather to present their redistricting concerns to Census Bureau officials.

Chapter 2. **Executive Summary**

In this chapter, we summarize major census 2000 recommendations made at the 1992 task force meetings (see appendixes D-F for attendees). Chapter 3 presents specific comments.

- 1. **Census Data Items**—Continue to provide 100-percent counts of total persons by race, Hispanic origin, and voting age for each Statedefined block and election precinct (VTD).
- 2. Statistical "Adjustment"—Any "adjustment" for undercount or overcount must produce counts (not subject to "sampling error" estimates) for population, race, Hispanic origin, and voting age for each State-defined block and election precinct and must be provided to State legislatures no later than the Public Law 94-171 deadline of April 1, 2001. The States must be assured early that there will be only "one" set of numbers.
- 3. P.L. 94-171 Data Products—States recommended that the Census Bureau continue to provide the P.L. 94-171 data tabulations on computer tape, paper printouts, and CD-ROM's (preferably all delivered simultaneously).
- 4. **Policy Matters**—States recommended continuation of the 1990 policy of providing sets of the P.L. 94-171 data tapes and maps, simultaneously, to the Governor and the State senate and assembly majority and minority parties.
- 5. **Census/State Communications**—States commended the State-by-State and regional meetings the Census Bureau's Redistricting Data Office and Geographic staff conducted in the 1980's and recommended the same close working

relationship in the 1990's, as well as the continuation of the "Census Redistricting Data Program" newsletter.

States recommended that NCSL continue the "reapportionment task force" or a similar group as a platform for Census/State discussions at NCSL meetings.

- 6. The Block Boundary Suggestion Project (BBSP, also called "Phase 1")—States recommended retention of the BBSP, permitting them to suggest natural and other visible ground features (e.g., roads, streets, and streams) to use in determining census 2000 tabulation blocks so that population counts are available for each block and State-defined election precinct.
- 7. Designating VTD (Election Precinct) Boundaries ("Phase 2")—States strongly recommended that they again be afforded the opportunity to submit VTD (election precinct) plans defining each small "building block area" for which they need individual census population counts, consistent with the spirit and letter of P.L. 94-171.

States wish to have the option of submitting census block-to-VTD "equivalencies" in electronic form or on paper copies of census block feature maps.

8. Census Training and Support for State Officials—States urged continuation of technical Phase 1 and Phase 2 training sessions by Census Bureau staff. Minority organizations stressed the need for the Census Redistricting Data Office to continue past efforts to involve their members in planning the Census 2000 P.L. 94-171 Program.

Chapter 3. Specific Comments at the 1992 Redistricting Conference

This chapter gives a summary of the topics considered by the conference attendees. The italicized comments represent the major recommendations of the NCSL task force on suggested components for the Census 2000 P.L. 94-171 Program. (Appendixes D-F list the attendees.)

Needed Data Items, "Residence Rules," Data **Products, and Policy Matters**

1. P.L. 94-171 requires that the Census Bureau provide only total population counts.

Why should we provide counts categorized by voting age, race, and Hispanic origin?

What would be the consequences, if any, if we furnished only 100-percent population counts for census 2000?

The States strongly urged the retention of the 1990 census P.L. 94-171 data content for the 2000 Census P.L. 94-171 Redistricting Data Program. The attendees noted that the U.S. Department of Justice and State and Federal courts require and use these data items in judging compliance with the Voting Rights Act.

2. Should we provide counts for all blocks and larger areas and not provide voting district (VTD) summaries?

What would be the results of dropping the option for States to define VTD's; that is, to eliminate Phase 2 (see page 9 for explanation of Phase 2)?

The majority of the attendees recommended that the Census Bureau allow the States to specify VTD's and receive counts for them as part of the official P.L. 94-171 data. This is, of course, consistent with the law that requires the Census Bureau to allow States to submit such geographic areas for tabulation of the data. All States noted that with or without VTD counts, they would still need individual block-by-block counts based on the short-form census questions asked of every household in a census block.

The States, facing legal deadlines to complete their redistricting plans, pointed out that it saves valuable time if the P.L. 94-171 data arrive already aggregated to VTD level as it can be merged immediately with local election data that are maintained for each VTD.

Florida and Georgia were exceptions; both States noted that their local officials changed the VTD boundaries before the census counts were issued for the VTD's that the State submitted. These two States will rely on the Block Boundary Suggestion Project (Phase 1) where they select the features to bound census blocks so that they increase the chance that they can aggregate individual census block counts to VTD's.

3. The Census Bureau allocated counts of overseas military and Federal civilian employees back to State of residence for apportioning Congressional seats.

Students of colleges were counted where they usually ate and slept as of Census Day (April 1, 1990). The homeless population was counted in the same manner: where they resided at the time of the census enumeration.

Are there comments on these census enumeration policies?

The States had no specific changes to suggest. Florida did note that they had a large number of overseas military who vote by absentee ballot and are reflected in the elections data for their local VTD's, but are not included in the decennial census counts for those VTD's. These disparities stood out statistically when they tried to merge elections data with decennial census counts for areas with high concentrations of overseas military.

4. The P.L. 94-171 statistical data products were shipped to the Governors and majority and minority legislative leaders by March 8, 1991.

Below we list these products:

- A computer tape file containing the P.L. 94-171 counts (i.e., 100-percent counts of the population, 5 major race groups and cross-tabulations for the voting-age persons; these counts were provided for each census block, block group, State-defined election precinct, etc.).
- Computer printouts of these P.L. 94-171 data.

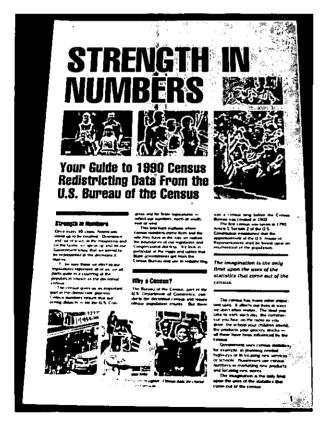
Many States reported little or no use of the printouts. Should the 2000 Census P.L. 94-171 Program furnish only P.L. computer tapes?

States opposed, by a 3 to 2 margin, the alternative of not providing paper printouts. Some States pointed out that the P.L. 94-171 paper copies allowed them to cross-check the accuracy of the tapes and gave them an immediate look at the data, again speeding the redistricting process

for States with stringent deadlines set in their constitutions or by court decisions.

States also indicated they prefer that the data be delivered on CD-ROM as well as on tape, as soon as possible.

- From 1983-1991, we used several methods to keep State officials informed about the developments in the P.L. 94-171 program:
 - Letters to the Governor and majority and minority leaders.
 - One-on-one meetings in each State capital.
 - Notices in the Federal Register.
 - Presentations at NCSL Reapportionment Task Force Meetings (1984-1992).
 - Informational memoranda to all task force attendees.
 - Articles in the Census Bureau's monthly newsletter, *Census and You*.
 - Publication of a comprehensive guide to 1990 census redistricting data, titled Strength in Numbers: Your Guide to 1990 Census Redistricting Data From the U.S. Bureau of the Census.



Strength in Numbers gave State legislatures a look at the kind of data the census would yield.

What communication techniques should be used for the 2000 census?

States felt that the Census Bureau should maintain all these communication channels for the 2000 census P.L. 94-171 program. States also recommended that NCSL maintain the Reapportionment Task Force or a special interest group forum for Census Bureau/State discussions in preparation for the 2000 census program and that it should begin to meet in 1993.

Geography, Blocks, Voting Districts, and Related Issues

Many geographic issues were raised during the program evaluation meetings held in 1992. The reader should consult the entire report, not just this section, for a total picture of the geographic recommendations made at these conferences.

A. The Block Boundary Suggestion Project (BBSP)

During Phase 1 of the Redistricting Data Program, the Block Boundary Suggestion Project (BBSP), States suggested visible features as 1990 census block boundaries. Although several States had contracted with the Census Bureau for statewide census block numbering for the 1980 census, it turned out that some boundaries selected by the Census Bureau for these blocks did not correspond to the boundaries of local election precincts.

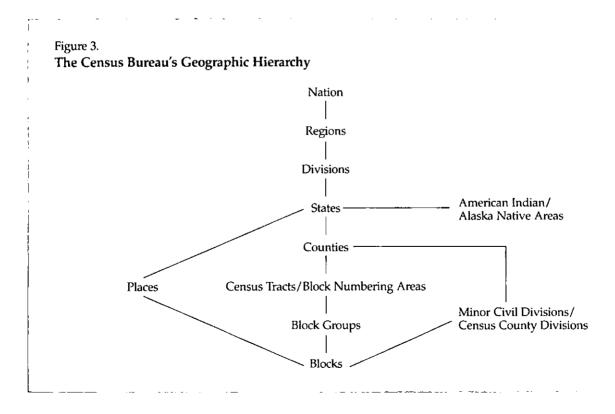
The BBSP was tested in 1984 and implemented in 1985. Thirty-eight States participated in the program. State representatives visited the 12 Census Bureau regional offices while our geographers were updating the features in the TIGER file. These representatives suggested additional visible features as 1990 census block boundaries, which they in turn expected to use as VTD boundaries. We guaranteed that all named roads and major water features (e.g., double-line drainage as depicted on a USGS 1:24,000-scale topographic map sheet) would be 1990 census block boundaries.

During Phase 2 of the 1990 Redistricting Data Program, those 38 States had a chance to review their BBSP work and our efforts to incorporate their suggestions. At that time, we made the necessary correction if we missed a feature suggested during the BBSP or failed to hold a named road or major water feature required as a VTD boundary.

Figure 2.

States Participating in Phase 1 and Phase 2 of the 1990 Census Redistricting Data Program

States participating	; in Phase 1	States participating in	Phase 2
Alaska	Montana	Alabama	Nebraska
Arizona	Nebraska	Alaska	Nevada
California	Nevada	Arizona	New Hampshire
Colorado	New Hampshire	Arkansas	New Jersey
Connecticut	New Jersey	California	New Mexico
Delaware	New Mexico	Colorado	New York
Florida	New York	Connecticut	North Carolina
Georgia	North Carolina	Delaware	North Dakota
Hawaii	North Dakota	District of Columbia	Ohio
Idaho	Rhode Island	Florida	Oklahoma
Indiana	South Carolina	Georgia	Pennsylvania
Iowa	Tennessee	Hawaii	Rhode Island
Kansas	Texas	Idaho	South Carolina
Kentucky	Utah	Illinois	South Dakota
Louisiana	Virginia	Indiana	Tennessee
Maine	Washington	Iowa	Texas
Maryland	West Virginia	Kansas	Utah
Massachusetts	Wyoming	Louisiana	Vermont
Minnesota	Puerto Rico	Maine	Virginia
Missouri		Maryland	Washington
		Massachusetts	West Virginia
		Michigan	Wisconsin
		Minnesota	Wyoming
		Missouri	Puerto Rico



Here are the issues related to the BBSP that concerned States:

1. Was the program worthwhile? Should it be repeated for the 2000 Census Redistricting Data Program? If so, when should the program be offered? If we offer the program on a schedule similar to the 1990 program, will that be sufficient to support the entire 2000 Redistricting Data Program?

The States strongly supported the retention of the BBSP as part of the 2000 Census Redistricting Data Program. The States emphasized that they must be allowed sufficient time to designate "must hold" as well as "must not hold" features. They requested the ability to designate features for the Census Bureau not to hold as a block boundary to eliminate some small blocks currently in the TIGER file that had no practical purpose. Many States also believed that both the States and the Census Bureau should put more emphasis on the BBSP. They would like the ability to tell the Census Bureau about additional new and corrected features that should be in our data base as well as suggesting "must hold" features. They also requested the opportunity to review the results of the BBSP (the 2000 census block configuration) before we assign the final 2000 census block numbers.

2. What changes should be made to the BBSP? Should the list of allowed visible features be expanded?

Were there features the States needed held as block boundaries that we did not accept?

Should the list of guaranteed features be expanded or eliminated? Is it safer for each participating State to identify each feature?

Figure 4

Total Number of Blocks and Election Precincts in States Defined for the P.L. 94-171 Program (Totals also included for the District of Columbia and Puerto Rico.)

	T Name	abulation Blocks	Election Precincts	Name	Tabulation Blocks	Election Precincts	
	Alabama	167,298	1,628	Nebraska	109,232	2,088	
	Alaska	16,979	442	Nevada	31,388	1,024	
	Arizona	101,269	1,930	New Hampshire	33,572	108	
	Arkansas	131,254	2,631	New Jersey	125,200	5,806	
1	California	392,917	25,605	New Mexico	78,223	984	
	Colorado	114,865	2,810	New York	274,760	11,738	
	Connecticut	50,571	775	North Carolina	219,601	1,680	
	Delaware	15,136	344	North Dakota	83,762	1,106	
	District of Columbia	5,135	140	Ohio	247,049	2,029	
	Florida	303,066	4,689	Oklahoma	160,145	2,317	
1	Georgia	197,469	2,297	Oregon	102,745	0	
ļ	Hawaii	13,381	274	Pennsylvania	310,668	9,495	
:	Idaho	57,335	596	Rhode Island	19,447	576	
4	Illinois	291,407	11,828	South Carolina	136,213	1,930	
	Indiana	190,06 2	5,426	South Dakota	69,953	1,353	
	Iowa	149,222	2,815	Tennessee	167,636	2,300	
1	Kansas	160,893	3,381	Texas	511,962	312	
1	Kentucky	124,125	0	Utah	45,030	1,645	
1	Louisiana	138,138	3,283	Vermont	22,788	124	
	Maine	51,202	312	Virginia	144,372	1,985	
	Maryland	73,780	1,605	Washington	128,109	2,673	
	Massachusetts	103,215	2,149	West Virginia	71,299	2,032	
	Michigan	237,027	5,923	Wisconsin	180,898	4,339	
	Minnesota	172,499	4,093	Wyoming	53,237	468	
I.	Mississippi	115,050	0	Puerto Rico	50,261	1,606	
	Missouri	200,280	4,178		·	-	
-	Montana	60,305	0	Total	7,011,430	148,872	

The States suggested that recommended "must hold" features be held as a census block boundary in its entirety rather than in pieces, and they also requested the ability to subdivide "superblocks" (such as a block with a substantial number of housing units in a subdivision usually one with many cul-de-sacs and no street or stream to use to subdivide the block). They further recommended that there be more block boundaries inside water blocks and requested a more logical method for numbering the water polygons. (For the 1990 decennial census, normally all water blocks within the same block group were assigned the same number.)

Some States also would like to use a minimal number of nonvisible features as 2000 census block boundaries: school district boundaries, "line of sight" lines, legislative district boundaries, cemetery boundaries, and township and range boundaries. Nearly all States requested the opportunity to designate existing (precensus 2000) State legislative district boundaries as "must hold" block boundaries so they can make 1990-2000 comparisons.

A few States requested that we not delete nonexistent ground features found by enumerators during census operations (after the insertion of the "must hold" block boundaries) since the deletions potentially caused a problem during the preparation of the description of a district (if they are used as a district boundary).

3. What would be the best method for us to use to implement the BBSP? Would the States prefer to visit our regional offices as they did in preparation for 1990?

Should we provide maps that reflect the feature updates made during the decade for annotation by the States? Should these maps show the 1990 VTD's? Should these maps show the 1990 census tract numbers and boundaries? Should the maps show the 1990 census block numbers and boundaries?

The States would like the option of updating Census Bureau-supplied paper maps or providing an electronic file of suggested updates to individual blocks. The States recognized the possible technical limitations of the Census Bureau's ability to handle an electronic file of "must hold" and "must not hold" features, but requested that we continue to work on the feasibility of this approach.

States said that it is critical to provide them with a 1990-2000 census block comparability tape file that shows the relationship of each of the 7 million 1990 census blocks to the census 2000 blocks. They also

requested that the outer boundary of the 1990 census blocks be kept as 2000 census block boundaries so that they could maintain some comparability. This "block comparability" is important because the Voting Rights Act requires historical data and they must be able to relate each 1990 census block population count to each census 2000 block population count, by race, Hispanic origin, and voting age.

The States recognized that perfect block comparability may not be possible, but asked that we attempt to keep the outer features of 1990 census blocks as block boundaries whenever possible.

Some States expressed the desire to continue the 1990 procedure of having the States discuss their recommendations for census block boundaries with the geographic staff at our regional offices.

B. Voting District Boundary Project (Phase 2)

An additional recommendation for the 1990 Census Redistricting Data Program was that States submit their VTD (election precinct) plans on Census Bureau block maps. During Phase 2, States delineated their VTD's on Census Bureau maps showing the boundaries of the 7 million blocks used to collect census data from every housing unit. This "collection geography" also included 50,690 census tracts, 11,586 block numbering areas, and 229,192 block groups.

During the spring of 1989, we sent census block maps to all 50 States, the District of Columbia, and Puerto Rico. By the end of the program, 46 States, the District of Columbia, and Puerto Rico had traced the outer boundaries of their election precincts on these block maps and returned them to us. In some cases, the States identified features they had requested as "must hold" features during BBSP that due to error had not been held as a 1990 census block boundary. In addition, they provided updates and corrections to features and the numeric codes associated with each feature.

1. Was the VTD Program (Phase 2) worthwhile? Are States using VTD's to redistrict? Will census blocks suffice for 2000? Is there a need to repeat Phase 2? If so, would a similar schedule suffice?

Should we let the States include other geography such as State legislative districts in this collection effort? We would not necessarily generate data for these areas, but it would mean simply that the boundaries would be in the TIGER data base.

What other areas would be worthwhile? What other geography should be included? ZIP Codes?

The States strongly recommended that a program similar to the 1990 census Phase 2 program be in place for the 2000 census. Although a few States said that they would devote their resources to the BBSP rather than to Phase 2, they all believed that the program should be offered. States would like to see legislative districts included in TIGER products even if we did not provide data for them.

What parts of the program should be repeated or deleted? Should we continue to identify pseudo-VID's? Should we make Phase 2 mandatory and require States to distinguish actual functioning election precincts from "approximated" VID's?

All aspects of the program should be retained; however, States requested that the distinction between "real" and "pseudo" VTD's be clarified for the 2000 census to eliminate confusion. The option to specify "real" VTD's should be continued.

Was a four-character VTD identification code sufficient? Should it be expanded? How many characters are needed?

The States recommended that the VTD code be expanded to at least a five-character alphanumeric identifier.

Were the VTD naming requirements sufficient? (Remember, we could not fit the names on the map.) Should the VTD names be shortened? Are there any suggestions for displaying the names other than what was done, which was to list them in the legend of the VTD Outline Maps?

There were no major comments on the VTD names; some States said that they used the maximum number of characters allowed.

Should States get a chance to review the Phase 2 work? What implications would this review create for the timing of this program? What changes would be required, suggested, to move up the program to include a review? What sacrifices would be made? What would the States want to review?

All States wanted the opportunity to review a preliminary assignment of 2000 census block numbers, with the opportunity to suggest further changes (such as subdividing superblocks and pointing out missed "must hold" block boundaries). We were asked to determine how a Phase 2 review might affect the timing of the program.

What nesting relationships should be respected for VTD's? States may recall that we attempted to notify State participants when an unusual change was made to a city limit via the Boundary and Annexation Survey, in order to see what changes should be made to the affected VTD's. Was this sufficient?

Should there have been more attempts to maintain the relationships among the various geographic entities? Are there suggestions on how to improve this portion of the project?

The States generally concurred that an improved method for notifying them of corrections to governmental unit boundaries was needed. The identification of nesting relationships should be negotiated during program planning.

This project was labor intensive for both us and the States. Can this information be provided electronically? What method would be preferable? Should we send the States a file to update or should the States send us a file to transfer data into the TIGER data base? Should the map option remain open for States not able or not desiring to submit their VTD's electronically? Should it be retained as a contingency plan?

The States would like the option of providing the VTD's electronically as well as on paper. The States also requested the ability to review the results of our insertion of the VTD's into our geographic files before tabulation to ensure the accurate representation of the VTD's. The States recognized that paper maps cannot entirely be removed from the process.

C. Census 2000 Blocks

For the 1990 census, we provided nationwide block numbering for the first time. As previously discussed, the States participating in Phase 1 (BBSP) of the 1990 Redistricting Data Program provided input into the boundaries of the 1990 census blocks.

During Phase 2, the P.L. 94-171 program participants were able to review the 1990 block configuration in its collection mode. That is, the final 1990 governmental unit boundaries (e.g., counties and cities) were not available. Once the final 1990 county, city, and minor civil division boundaries were added, the three-digit 1990 census block number frequently became a four-character alphanumeric code.

Was the coding scheme for 1990 census blocks sufficient to support the number of blocks (7 million). In some areas, we ran out of block numbers within a block group and had to fishhook across features that otherwise would have been 1990 census block boundaries.

Should we use a four-digit basic block number or a three-character alphanumeric basic block code or something else so that more polygons that meet the block numbering criteria can be uniquely identified?

The States strongly supported the continued policy of having a unique identifier for each polygon. The States strongly recommended that we use a three-character alphanumeric identifier over a four-digit number.

The States felt that zero population blocks were useful and would not like to see them "all" disappear.

Where superblocks are identified, should the States be permitted to suggest additional features (e.g., roads built since the 2000 census collection blocks were numbered) as tabulation block boundaries for data tabulation purposes?

How best could we approach this operation? What would be the latest possible timing for this suggestion to be carried out? Should this be part of Phase 2?

Several States asked that we provide a mechanism to create additional tabulation blocks based on the enumerator updates to the maps (to recognize the blocks in new subdivisions).

One possible method would be for us to work with each State to target specific growth areas so that large blocks are not created for areas that will develop just before a census. Another possible method would be for us to recognize the new blocks as additional tabulation blocks by assigning an alphabetic suffix to the basic 2000 census block identifier.

Should there be a unique numbering system for islands? Or would the increase in the possible number of blocks in a block group meet this need?

Several States requested that there be expanded numbering of islands so that multiple islands do not have the same tabulation block identifier. Several States have questioned the number of blocks defined within military reservations? What changes would the States like to see?

Several States said that they would assist us in providing updates to features within military reservations so they could be used as block boundaries. These States emphasized the need for multiple block numbers within military reservations so they can subdivide these bases, as necessary to balance population of districts.

Several States have suggested they would like us to accept nonvisible boundaries as block boundaries, such as school district and special taxing district boundaries. In the past, we have said that to have such boundaries as block boundaries would vastly increase the enumerator cost and lower the quality of the assignment of housing units to the proper block because of the inability of the enumerators to locate the invisible boundary.

What suggestions do the States have that will allow us to include these boundaries without harming the quality and timing of the decennial census data tabulations?

Some States said that the inclusion of State legislative districts in the Census Bureau's geographic files (even though data would not be tabulated for them, and they may not be 2000 census tabulation block boundaries) would be of some assistance.

What geographic entities should be included/ excluded as collection geography for the 2000 census? Are there any suggestions on how we can resolve the problems between freezing the collection geography (census tract/block number) in a suitable time frame to carry out the data collection efforts of the census while maintaining a current data base? Are there suggestions on how we can delay finalizing census tract/census block boundaries?

Please see earlier comments on this page.

D. Census Support

For both the Phase 1 and Phase 2 programs, we provided both written procedures and training. Are there any suggestions for providing more effective support for these programs?

During BBSP, Census Bureau officials visited each State capitol to describe the program. During Phase 2, we conducted several training sessions in conjunction with the NCSL Annual and AOL meetings. In addition, the Redistricting Data Office held special briefings for Black, Hispanic, Asian and Pacific Islanders, and American Indian and Alaska Native organizations.

Was this the best method for providing training? Should training be done on an individual State basis? Are there any suggestions for improving the support provided to the participating States for the 2000 program? If we provided videotape training modules, could you use this for your staff in lieu of onsite training?

Several States said that video training packages, in addition to training sessions at NCSL meetings similar to that provided for the 1990 Redistricting Data Program, would be of assistance at the local level to enable them to further educate their election officials. The States supported having the same close assistance from the Census

Figure 5. 1990 Census County Block Map

Bureau regional offices and headquarters staff that they received before the 1990 census.

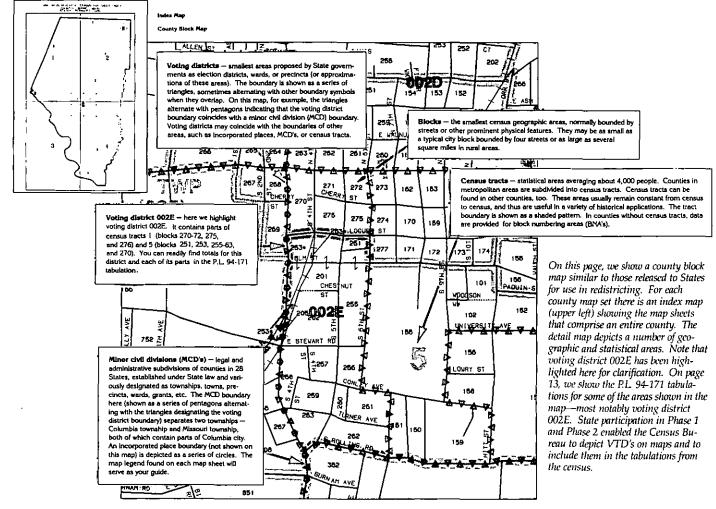
Maps and TIGER Extract Products

A. Map Products

For the 1990 census, the Census Bureau promised to provide the following map types to each State to accompany the P.L. 94-171 data file:

- County Subdivision Outline Maps
- Voting District Outline Maps/Census Tract Outline Maps
- P.L. 94-171 County Block Maps

We were not able to produce the *County Subdivision Outline Map* in electrostatic form for delivery to all States before the arrival of all the data



files in March 1991. Was the lack of this type of map a hindrance to the State in its redistricting efforts? Is this map type really needed by the States for redistricting, or is it a "nice to have" map?

The States generally believed that they do not need the County Subdivision Outline Maps. For 1990, they arrived too late and their nonavailability did not hinder work.

We provided either a set of Voting District Outline Maps to each State for counties where the State provided VTD's or Census Tract/Block Numbering Area Outline Maps for all other counties at approximately the same time as the P.L. data file. Was this type of map useful?

Some States have requested that they receive both a Voting District Outline Map and the Census Tract/Block Numbering Area Outline Maps.

Do States really need both types of maps or should we ask each State which type they would like? Is it really necessary to produce this map type when it shows the same geographic areas that are on the P.L. County Block Map? Do the States need this type of map much before the delivery of the P.L. data files?

The States strongly supported that they receive both the VTD and Census Tract/Block Numbering Area Outline Maps.

We provided a set of the P.L. 94-171 County Block Maps to each State for every county in their State before or at the time of the delivery of the P.L.

Hispanic counts -

of any race. The P.L. 94-17

784

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Hispanics may be

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Race counts - header displays five

major racial groups.

Figure 6.

1990 Census P.L. 94-171 Data

Voting-age counts — for the first time, the P.L. 94-171 counts conta count of the population 18 years old PL 94-171 Table

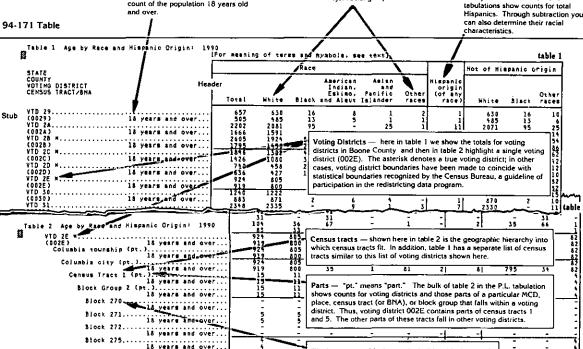
Block 276....

Cersus Tract 5 (pt.

18 years and over

). 18 years and over

18 years and over ...



904 909 901

Blocks

every block in the Nation.

-17

789

-census blocks are the building blocks out o

-1

which you'll rebuild voting districts, especially in densely populated areas. Within 1 year of the Census, the Census Bureau must produce counts for

94-171 data tapes. Many States commented on the large number of map sheets and the difficulty in handling them.

If we were to provide an electronic file, such as a TIGER extract product, <u>in lieu of</u> the provision of the paper *P.L. County Block Maps*, would that be acceptable to the State?

Although several States acknowledged that they "probably could" get along without the County Block Maps, these maps were an important check on their automated systems and helped clarify ambiguous situations. The States strongly recommended that we continue to provide County Block Maps. They further recommended that we continue to look for ways to reduce the number of map sheets.

For the *P.L. County Block Maps*, we had difficulty in coming up with distinct symbology for the many different geographic areas that the map had to portray. Are there any governmental units or statistical areas shown on these map sheets that need not be shown?

Should we stay with black and white map sheets or use color to make the map sheets more legible for the 2000 census? (If we use color as a way to distinguish boundary types, the States might not be able to reproduce copies without color copier equipment.)

Because of the limitation on the States' ability to duplicate maps in color, some States recommended that we not supply maps that use color to distinguish boundaries. However, other States supported the use of color to make the maps more legible, especially for work maps where there is no need for duplication. These States believe that the technology will be available to make duplicates of large format color maps, if necessary.

Some States have commented that we should incorporate the current State legislative districts into the TIGER data base, even though we would not tabulate data for these areas, so that they could be shown on the map sheets or in the TIGER extract products.

Should we spend scarce resources to accommodate this request? Should we do so if it would mean dropping another product (e.g., *Voting District Outline Maps*)?

What other suggestions or comments do States have on the type of map sheets and the content

of those map sheets? Was the timing on the provision of the *P.L. County Block Maps* sufficient?

Several States made the following recommendations:

- The Census Bureau should expand its symbol library and use a bolder line weight for census block boundaries to distinguish census block boundaries from features not used as census block boundaries.
- The Census Bureau should continue to improve the nonstreet feature naming on its map sheets.
- The Census Bureau should continue to improve the map scaling routines.
- The Census Bureau should improve its choice of font. Many States complained that they could not distinguish between a "5" and a "6" on the County Block Maps.
- The Census Bureau should modify its inset routine so that all of a place (e.g., city) was on the inset—places should not be part in an inset and part outside an inset. [Note: the Governmental Entity Map series eliminated this problem, but this map series was not available in time to the States before they had to complete redistricting.]
- The Census Bureau should improve its map feature naming routines to eliminate unnecessary repetition of street names.
- The Census Bureau should improve the geographic area names placement so that the names do not obscure the block numbers.

For the 1990 census, we provided very detailed maps to the participants in the 1990 Redistricting Data Program in conjunction with Phase 2 (the delineation of the VTD's) and Phase 3 (the dissemination of the P.L. 94-171 data products). Providing a large number of map sheets in multiple copies to each State was a large undertaking.

Were these map sheets used? Are paper map sheets necessary in 2000? Were the map types usable?

Would just providing *Census Tract* or *Voting District Outline Map* sheets (i.e., map sheets showing the boundary features of the VTD's or census tracts) at the time we ship the P.L. data tapes be sufficient? Are map sheets showing all blocks really needed and used with the extensive geographic information systems? Would the participants in the 2000 Redistricting Data Program accept TIGER extract products in lieu of paper maps at various points during the Redistricting Data Program?

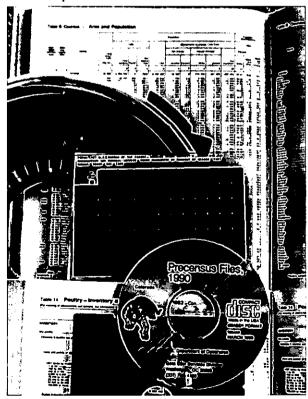
Please see earlier recommendations related to the map products on page 12 and 13.

B. TIGER

For the 1990 census, we built and used the TIGER data base for the first time. Because we were building the TIGER data base at the same time we were working with the States on the first two phases of the 1990 Redistricting Data Program, we were limited in what we could provide to the States early in the program.

We did not anticipate the time required for all data users (not just the State legislatures) to establish working geographic information systems (GIS) based on the TIGER/LineTM files. We originally believed that making the 1989 Precensus TIGER/ Line files available for purchase by all data users, including the States, would provide sufficient lead time for the States to establish functioning computer-assisted redistricting systems.

Given the computer requirements and the time we required to convert the TIGER/Line files,



Census Bureau data come in many media—printed reports, computer tape, compact disc (CD-ROM), microfiche, and diskette.

many States urged us to produce the Initial VTD Codes TIGER/Line files, which they recognized would not be totally consistent with the P.L. 94-171 data files. Was the availability of the Initial VTD Codes TIGER/Line files useful? Could the States have accomplished their task without it?

One of the comments from the survey suggested that we try to get the final version of the 2000 Census TIGER/Line files to the States substantially in advance of the delivery of the P.L. 94-171 data file. Would the availability of the 2000 Census TIGER/Line file (or equivalent product) by early January 2001 be sufficient and eliminate the need for a version of the file in the fall of 2000?

The States should be aware that the 2000 census version of TIGER may not be a TIGER/Line file; the proposed Spatial Data Transfer Standard (SDTS) shortly will be a Federal Information Processing Standard (FIPS) and the spatial data products from TIGER will need to meet this standard in 2000. The 2000 census product may be TIGER/SDTSTM rather than TIGER/Line files.

The States recommended that we commit to providing the final version of the TIGER/Line file (or its 2000 substitute format) as part of the Census 2000 Redistricting Data Program by December 2000; this would eliminate the request for an incomplete interim version corresponding to the Initial VTD Codes TIGER/Line file.

Several States recommended that we also provide a 1990-2000 census tract/block comparability file along with the 2000 TIGER/Line file as a P.L. 94-171 product. The States also recommended that we continue to provide the internal points contained both in the data files and the TIGER/Line files.

Many States urged us to keep the TIGER data base up to date. We have consistently said that the TI-GER data base is not a "flash in the pan." It is being used for the 1992 Economic and Agriculture Censuses, and we fully intend to enhance and keep the TIGER data base up to date for the 2000 census.

We have already started updating TIGER in support of the 1992 censuses. We have held four working group sessions over the last 2 years to discuss the technical considerations of working with statewide agencies to exchange digital data. We recently signed an agreement with the U. S. Geological Survey (USGS) to establish a joint committee to oversee the definition and implementation of shared digital geographic data that will be used by the USGS to prepare its intermediate-scale mapping and information products. We will use it to provide the geographic support products and services required for the 2000 decennial census and other statistical programs. We expect to continue working with other Federal, State, and local agencies to incorporate their improved spatial data products into TIGER and subsequently make this information available to USGS.

What comments and suggestions do the States have that could help us achieve the goal of keeping the TIGER data base up-to-date?

The States strongly recommended that we work closely with each State to keep the TIGER data base up-to-date. Many States expressed concern that our resources would not be adequate to keep this critical data base up-to-date.

The States recommended that we keep more specificity in the identification of each line segment in TIGER. If there is no name for the feature, then they requested that the type of feature be identified.

The States recommended that we eliminate technical problems, such as bodies of water linked to noncontiguous parcels of land and eliminate the very small "micro" blocks that crept into the data base.

Other recommendations:

- Perfect the block numbering algorithm to fishhook blocks created by expressway interchange ramps, esplanades, and so forth.
- Improve the address range information and coverage in TIGER.
- Eliminate gaps and overlaps of areas between counties.
- Improve the TIGER feature annotation (clean up the feature names to eliminate variations in spelling, prefixes, and so forth).
- Make the primary and alternate names consistent for a feature (so they do not alternate along a chained feature).
- Develop a secondary method of coding to show dual classification for a feature (so that a user would know that a feature is both a street and a township boundary, for example).

The TIGER data base currently does not allow for the inclusion of State legislative districts. A number of participants in the Redistricting Data Program have indicated that including State legislative districts in the TIGER data base might assist the States in their redistricting efforts.

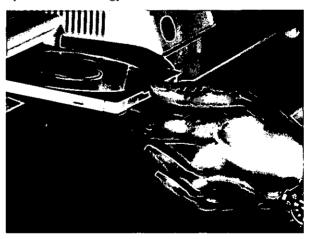
Does it benefit the States to incorporate into the TIGER data base the legislative districts before redistricting and make them available to the general public, even though no Census Bureau statistics would be tabulated for these districts?

Is this a worthwhile effort if the State legislative districts do not follow census block boundaries? Should we show these boundaries in the TIGER data base (and make them available in TIGER/ Line files) in their actual location even if we will not tabulate data based on these boundaries (in other words, we would not hold State legislative districts as 2000 census block boundaries)?

The States recommended we include State legislative districts, as well as the township and ranges (Public Land Survey System) in the geographic data base.

C. Electronic Submission of Phase 1 and Phase 2 Blocks and VTD's

A number of States have recommended that we provide an extract from the TIGER data base (such as a TIGER/Line file) to the States before Phase 1 (BBSP) of the Census 2000 Redistricting Data Program and allow the States to update this TIGER product with their must-hold block boundaries before returning the file to us. We have not yet developed a methodology that would enable us to take a



P.L. 94-171 data also are released on CD-ROM. Using a Census Bureau CD-ROM is easy. Slide the disc into the drive and just type "GO" to access the data.

spatial data file from the State and incorporate feature and other updates into the TIGER data base.

We held four working group sessions during 1990-1991 with participants from several States and Federal agencies to discuss the technical issues associated with exchanging updated TIGER files. We continue to work on the problems (which are many) and will be working with at least one State, in cooperation with the USGS, to further test the feasibility. There is no assurance that we could develop the capability to exchange TIGER files with the States to incorporate BBSP information.

Should we continue to work toward this effort, possibly at the expense of other efforts to enhance and correct the TIGER data base?

States also have expressed a desire to provide the VID's (Phase 2) to us as files, either as an equivalency file or as an updated TIGER file. We have some experience in using equivalency files to obtain the 103rd Congressional District boundaries based on 1990 tabulation block numbers.

Would the States be able to quickly provide a 2000 VTD file to us based on a TIGER/Line file (or other equivalent file) that we provide? What time frame should we allow for the States to undertake this work and provide the file back to us? Would the States prefer to undertake this work before or after we have "fixed" the 2000 census block numbers? Are there benefits to the States if we only could accept an equivalency file for Phase 2 based on a set of 2000 census block numbers or some other Census Bureaudesignated polygon-based system?

The States recommended that we accept electronic submissions for all phases of the 2000 Redistricting Data Program. The States recognized that there may be technical limitations on our ability to implement this recommendation, especially for the BBSP.

Chapter 4.

How States Used 1990 Census Redistricting Data

Elected officials throughout the 50 States used the 1990 Public Law 94-171 population counts for 7 million individual census blocks to construct new State assembly, senate, and congressional districts in 1991. To illustrate this important process, let's look at the North Carolina Legislature's effort.

We will describe 1) pre-1990 preparations, 2) the steps in constructing the State assembly and senate districts, and 3) the resulting plans that were adopted and used in the 1992 elections. The North Carolina experience is representative of how the other States used the P.L. 94-171 small-area data.

First, the North Carolina General Assembly's Legislative Services staff began in 1987 to design a computerized data base and map-drawing system that would combine election results for each election precinct, collate the planned 1990 census block-byblock population counts, and create alternative legislative districts. Using prototype P.L. 94-171 data tapes and precensus TIGER/Line mapping files, North Carolina finalized its automated census redistricting data system design before Census Day, April 1, 1990.

The second stage of North Carolina's work began in February of 1991, when the official 1990 Census P.L. 94-171 redistricting data file and accompanying block maps arrived in Raleigh. Having "worked on" their system the year before, the Legislative Services Staff quickly merged the block-by-block census counts with the corresponding individual election precincts and the matching blocks in the TI-GER/Line file from the Census Bureau.

Within days, the staff began to generate dozens of proposed plans showing alternative boundaries for each of 107 general assembly and senate districts. The P.L. 94-171 counts of population by race and voting age were used to "profile" each proposed district so the State could avoid districting alternatives that might not comply with the requirements of the 1965 Voting Rights Act provisions and amendments. The North Carolina General Assembly provided "dedicated" computer terminals so the general public could use these block data to create plans and participate as citizen "legislators." Almost one-third of the computer time used in the summer of 1991 was devoted to this public access.

Some 900 plans and variations of plans were drawn and considered before the North Carolina Legislature adopted a plan that redistricted the house and senate. This plan was ultimately put in place after preclearance by the U.S. Justice Department to ensure conformance with Section 5 of the Voting Rights Act. Reproductions of the North Carolina senate, house, and congressional districting plans are shown in the following illustrations (see figure 6).

The maps and tables on pages 18-19 show how States used 1990 census data in their redistricting plans.

Map A shows the 98 districts established for the North Carolina House of Representatives. Map B shows two districts up close; note that parts of counties may fall into more than one district. Map C shows Whiteville, a city with census blocks in both districts. Individual blocks must often be moved between districts to achieve court-mandated population equity and to comply with the Voting Rights Act of 1965.

Table 1 shows some of the P.L. 94-171 data—total population, race groups, and voting age population. Table 2 shows the new numbers allotted to each district, the ideal population under the law, and the variation from the ideal.

An interesting "fringe" benefit to the automated redistricting and mapping system developed by North Carolina was its use for marrying 1990 census block demographic data with locally collected health and other statistics to create profiles for specially defined health catchment areas, school districts, and the like. The cost of the system will be amortized throughout the 1990's for planning new State and local programs to deal with housing, health, and growth issues. The State legislatures of Georgia, New York, Texas, and others developed similar computerized mapping and census data systems that rely on the block-by-block TIGER/Line and P.L. 94-171 data files.

North Carolina House of Representatives Districts

January, 1992

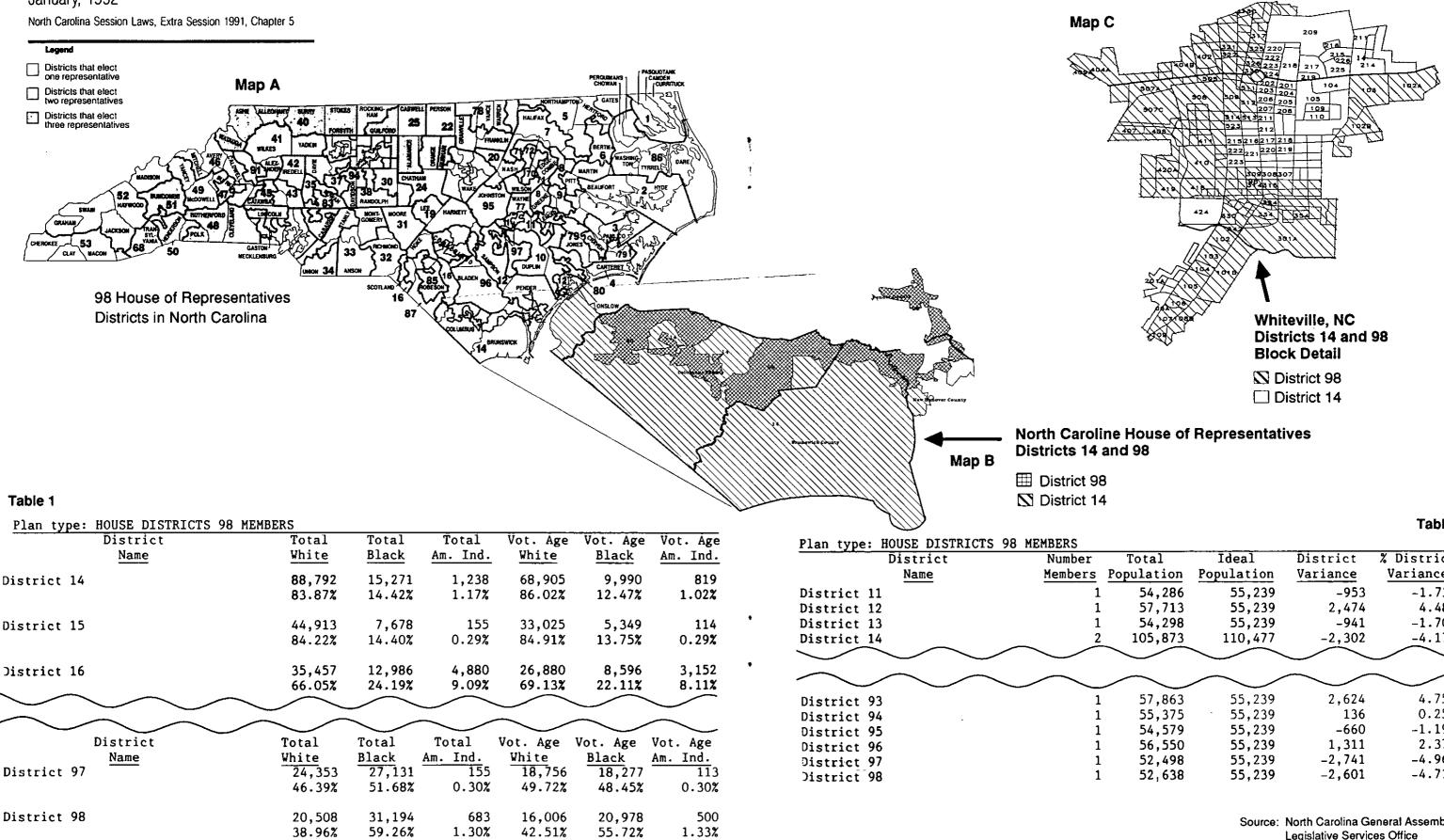


Table 2

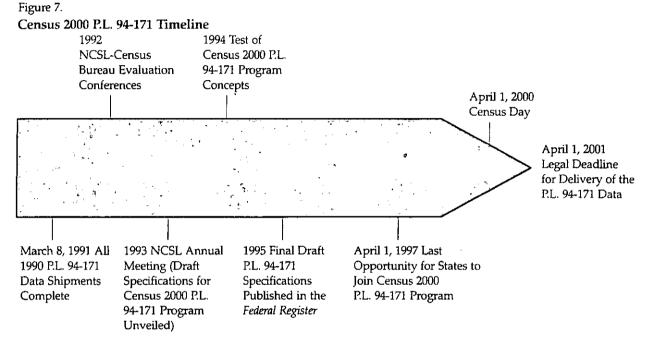
Total	Ideal	District	% District
Population	Population	Variance	Variance
54,286	55,239	-953	-1.73%
57,713	55,239	2,474	4.48%
54,298	55,239	-941	-1.70%
105,873	110,477	-2,302	-4.17%
\checkmark	$\overline{}$		$\overline{}$
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57,863	55,239	2,624	4.75%
55,375	55,239	136	0.25%
54,579	55,239	-660	-1.19%
56,550	55,239	1,311	2.37%
52,498	55,239	-2,741	-4.96%
52,638	55,239	-2,601	-4.71%

Source:	North Carolina General Assembly
	Legislative Services Office

Chapter 5.

Benchmarks to the Census 2000 Redistricting Data Program

Although the next census is 7 years away, the planning for census 2000 is well underway. Key dates for State participation in the next Census Redistricting Data Program are well along. The "timeline" illustrated on this page shows several legal deadlines and planned events.



Even before 1995 when the Census Bureau plans to select for testing the methods to be used to collect the census 2000 data, we must make decisions on how the Redistricting Data Program will be implemented, as the P.L. timeline shows. The Census Bureau has the objective of providing State legislatures more time than was scheduled in the 1980's to plan budgets and technical systems that will support their redistricting efforts in 2001. As the recommendations described earlier in this report indicate, early planning by the States and the Census Bureau made for the successes achieved in the 1990 Census Redistricting Program. We intend to build on that progress, and with the continuing partnership of the States, that goal will be obtained.

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89 STAT. 1023

Public Law 94-171 94th Congress

An Act

To amend section 141 of title 13, United States Code, to provide for the transmittal to each of the several States of the tabulation of population of that State obtained in each decennial census and desired for the apportionment or districting of the legislative body or bodies of that State, in accordance with, and subject to the approval of the Secretary of Commerce, a plan and form suggested by that officer or public body having responsibility for legislative apportionment or districting of the State being tabulated, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 141 of title 13, United States Code, is amended by adding at the end thereof the following new subsection:

ing new subsection: "(c) The officers or public bodies having initial responsibility for the legislative apportionment or districting of each State may, not later than three years prior to the census date, submit to the Secretary a plan identifying the geographic areas for which specific tabulations of population are desired. Each such plan shall be developed in accordance with criteria established by the Secretary, which he shall furnish to such officers or public bodies not later than April 1 of the fourth year preceding the census date. Such criteria shall include requirements which assure that such plan shall be developed in a nonpartisan manner. Should the Secretary find that a plan submitted by such officers or public bodies does not meet the criteria established by him, he shall consult to the extent necessary with such officers or public bodies in order to achieve the alterations in such plan that he deems necessary to bring it into accord with such criteria. Any issues with respect to such plan remaining unresolved after such consultation shall be resolved by the Secretary, and in all cases he shall have final authority for determining the geographic format of such plan. Tabulations of population for the areas identified in any plan approved by the Secretary shall be completed by him as expeditiously as possible after the census date and reported to the Governor of the State involved and the officers or public bodies having responsibility for legislative apportionment or districting of such State, except that such tabulations of population of each State requesting a tabulation plan, and basic tabulations of population of each State, shall, in any event, be completed, reported and transmitted to each respectively State within one year after the census date.". Dec. 23 1975 [H.R. 1753]

Population, tabulation for State legislative apportionment.

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SEC. 2. (a) The heading for section 141 of title 13, United States Code, is amended by adding at the end thereof the following: "; tabulation for legislative apportionment". (b) The table of sections for chapter 5 of title 13, United States Code,

is amended by striking out the item relating to section 141 and inserting in lieu thereof the following:

"141. Population, unemployment, and housing; tabulation for legislative apportionment.".

Approved December 23, 1975.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 94-456 (Comm. on Post Office and Civil Service). SENATE REPORT No. 94-539 (Comm. on Post Office and Civil Service). CONGRESSIONAL RECORD, Vol. 121 (1975): Nov. 7, considered and passed House. Dec. 15, considered and passed Senate.

DEPARTMENT OF COMMERCE

Bureau of the Census STATE REAPPORTIONMENT/ REDISTRICTING NEEDS

1980 Census Population Counts

In accordance with the requirements under Pub. L. 94—171 (13 U.S.C. 141), the Director of the Bureau of the Census is issuing below a statement of the Bureau's plans for providing population counts for State legislative reapportionment/redistricting needs. This statement also specifies the criteria to be met by the officers or public bodies having initial responsibility for the legislative apportionment or districting of each State which wishes to request a tabulation of 1980 census population counts by specific geographic areas to meet the particular State's data needs for reapportionment/redistricting purposes.

This statement has been provided to the Governor, Secretary of State, and certain legislative officials of each State. Attachments A and B which are referenced in this statement are multicolor example maps (illustrations) which could not be reproduced in this notice. Copies of these attachments and the names and titles of the specific officials in each State to whom these materials were provided are available on request from the Director, Bureau of the Census, Washington, D.C. 20233.

1980 CENSUS POPULATION COUNTS FOR STATE REAPPORTIONMENT/REDIS-TRICTING NEEDS: CRITERIA FOR SUBMITTING GEOGRAPHIC PLANS UNDER PUBLIC LAW 94-171

In accordance with Pub. L. 94-171, the Census Bureau plans to provide, insofar as possible, the population counts needed by each State for its reapportionment/redistricting purposes; and to produce these statistics in a timely, accurate, and useful fashion.

Outlined below are the Bureau's plans regarding the data which will be available for reapportionment/redistricting purposes if the Bureau's budget requests are approved and if technical problems can be solved.

1. The 1980 census block statistics program will produce: a. population counts by block in the urbanized area portion of each SMSA (i.e., the central city or cities, plus the surrounding "built-up" area)—this information is the same as that provided in 1970:

b. population counts by block for each place of 10,000 or more inhabitants in 1960 outside urbanized areas—this is an expansion over the 1970 program.

2. As in 1970, State or local authorities will be able to contract (at their expense) with the Bureau to produce block data for areas not covered in the regular program; a statement on the "contract block" program will be issued later in 1976. 3. The Bureau is testing the feasibility of processing the census results so as to produce, simultaneously, population counts for enumeration districts (ED's), blocks, census tracts, incorporated places, minor civil or census county divisions, counties, and States; if this can be accomplished successfully, the data will be available to all States by early 1981.

4. For blocked areas, the Bureau will provide 1980 census population counts for each block, as noted above; the States could then use these data as "building units" to aggregate (accumulate) counts for election precincts, legislative districts, etc. If time permits, the Bureau will aggregate the counts for individual blocks to produce election precinct totals, provided these precinct boundaries meet the criteria outlined later in this statement.

5. For areas that are not blocked, the Bureau will furnish the State officials with population counts by election precincts, provided their boundaries meet the criteria outlined later in this statement. If the State does not wish to receive population counts by election precinct, the Bureau will furnish the State with population counts by census ED's.

Guidelines which the Bureau plans to issue later in 1976 will allow the States to provide input for the delineation of the ED boundaries.

6. At this time, the Bureau contemplates providing only population count figures by precinct. If, however, the tabulation process (described in 3 above) includes characteristics data, as appears, likely, it may be feasible to provide a limited amount of such data (specifically, race and Spanish-origin identification) along with the population counts; this will be determined later. The Bureau will make the data for precincts available on tape, microform, and printout, but does not plan to publish precinct data.

With reference to election precincts (a type of area not recognized in previous decennial censuses), a State may request precinct data for all or part of the State. In making such a request, the State must consider the following three points: First, the appropriate public body in each State must furnish the Bureau, not later than April 1, 1977, with up-to-date maps on which the precinct boundaries are clearly drawn. Second, these precinct boundaries must coincide with visible features readily distinguishable on the ground by a census enumerator, except where the precinct boundary is coextensive with the boundary of a county, incorporated place, or minor civil division (i.e., township or its equivalent). This is necessary so that there will be no doubt in which of two or more adjacent precincts a given household should be counted. (With regard to both of these points and other relevant mapping matters, see the section on "map re-quirements.") Third, since the Census Bureau cannot undertake to revise its maps once the process of entering the precinct boundaries thereon has started, it is necessary that the precinct boundaries remain unchanged through 1980 for the census tabulations to retain their usefulness (except where boundaries are changed due to annexations, detachments, etc.).

MAP REQUIREMENTS FOR PROVIDING ELECTION PRECINCT BOUNDARIES

I. Election Precinct Information. A. Precinct boundaries must follow visible, easily recognized features (e.g., streets, railroad tracks, drainage features such as streams, creeks, and lakes, topographical features such as ridges) which are indicated on the map. The single exception occurs where a precinct boundary coincides with a county line, the limits of an incorporated place (city, village, etc.), or the boundary of a minor civil division (township, etc.) which does not follow such a visible feature.

B. Precinct boundaries are to be drawn on the map in red pencil. Where corporate limits or the boundary of a county or a minor civil division (MCD) are the same as the precinct boundary lines, the mutual boundary is to be shown as a single green line.

C. Precinct boundary lines must be drawn on the maps with care so that there can be no confusion as to which features the precinct boundary is following. After the boundaries have been drawn, the map should be checked to be sure that every feature used as a boundary is clearly named.

D. Written descriptions in lieu of maps cannot be accepted and are not to be submitted. However, if available, they should be retained in the State coordinating office for discussion purposes in case identification problems arise. Accordingly, the information shown on the maps must be sufficiently detailed so that a person will be able to locate the precinct boundaries by only using the map.

using the map. E. If a precinct boundary coincides with a county, corporate or MCD boundary which does not follow a physical feature, the first address number (in rural areas, the first Rural Route box number) on either side of the boundary should be listed on the map next to the boundary. If there are no address numbers or box numbers near the respective sides, mark both sides with a zero (O). F. The name or number of each precinct

F. The name or number of each precinct must be clearly shown in red pencil within its boundaries.

G. The accuracy of the precinct boundaries must be certified on each map sheet by an appropriate official of the State or local government. The statement should be as follows: "I certify that, to the best of my knowledge, the precinct boundaries shown on this map are those legally in effect and are accurate as of this date;" the statement must be signed and dated, and the title of the signer indicated.

the signer indicated. H. When the boundary of a city, town, village, township, etc., changes due to annexations, detachments, or other actions, and this change affects precinct boundaries, a map detailing the new precinct and corporate boundaries must be submitted to the Bureau within 30 days of the change, but in no case later than January 1, 1980. However, if such a place's boundaries are coextensive with those of a single precinct and continue to coincide after the annexation or detachment occurs, only the names and precinct numbers (or names) of such places need to be submitted (see II.B. below). II. Maps. A. Maps of Counties (Attachment A). The basic map on which precinct boundaries and precinct numbers (or names) are to be shown is a county map. In order to insure exact location of boundaries by census enumerators, the county map is to be supplemented by separate maps for incorporated places (e.g., townships), and other areas with dense street or road pattern.

street or road pattern. 1. Size and scale. The size of a map sheet generally should not exceed 3 feet by 4 feet. The scale should not be so small that the information on the map is difficult to read. Depending on the density of the road pattern and the size of the area being covered, the scale of county maps should range between 1"=2 miles. In counties where there are few roads, a scale of approximately 1"=3 miles to 1"=5 miles would be acceptable. The scale of the map must be indicated clearly on the map. The map can be composed of one sheet

The map can be composed of one sheet or a series of sheets; however, where precinct boundaries can be drawn clearly on a single sheet, coverage of a county on one sheet is preferable.

2. Map features. Maps should include all existing roads or streets. "Paper" or undeveloped streets or roads (i.e., those indicated on a map, but for which no scraping of road bed has taken place) should be excluded. Railroad tracks and major drainage features (e.g., rivers, creeks, lakes) should also be shown, and the names of each of these features indicated. Additional features or symbols (e.g., churches, schools, factories) should be limited or excluded altogether. The following should be excluded totally from the map; underground utility lines, land use and zoning symbols or shading, symbols for vegetation cover, topographic contour lines, and similar items that obscure the basic street pattern and names. All features, names, titles, and symbols shown on the map must be clearly shown and legible.

3. Coverage and boundaries. Maps must include the entire area of the county. They must show the current boundaries of all incorporated places and MCD's. Where the boundaries of a county, incorporated place, or MCD coincide with a precinct boundary, such a mutual boundary is to be shown by a single green line.

4. Separate maps. For each incorporated place subdivided by the boundaries of two or more precincts, a separate map must be provided (see II.B. below). For each MCD where the precinct boundaries cannot be shown clearly on the county map, a separate map must be provided (see II.C. below). For each area of the county with a dense street or road pattern which is subdivided by precinct boundaries, a separate map must be provided. For each area where a separate map is provided, the precinct lines need not be drawn on that portion of the county map. For each incorporated place or MCD for which there is a separate map, indicate "See Separate Map of (place or MCD name)" within its boundaries on the county map. For other builtup areas for which separate maps are provided, each such case should be blocked off in orange on the county map and identified as "Inset A," "Inset B," etc., and the separate may similarly identified. 5. Date. On the county map and on the separate map sheets, the date (month/year) of the base map should be indicated. If the map has been updated, the date (month/year) of the latest revision should be shown.

B. Maps of Incorporated Places (cities, towns, villages, boroughs) (Attachment B). A separate map of an incorporated place is required only when the place is subdivided into two or more precincts. Separate maps must be keyed to the county maps as noted in II.A.4. Each place map must show the State name and county name(s) in which it is located.

1. Size and scale. The size of the map sheet generally should not exceed 3 feet by 4 feet. The scale should not be so small that the information on the map is difficult to read. Depending on the density of the street and road pattern and the size of the area being covered, the scale of incorporated place maps should range between 1'' = 800' and 1'' = 1,600'. The scale of the map must be indicated clearly on the map. The map can be composed of one sheet or a series of sheets; however, where precinct boundaries can be drawn clearly on a single sheet, coverage of an incorporated place on one sheet is preferable. It is desirable that all map sheets of the same city be of the same scale. If necessary, two or more contiguous places may be shown on a single map sheet.

2. Map features. Maps should include all existing roads or streets. "Paper" or undeveloped streets or roads (i.e., those indicated on a map, but for which no scraping of road bed has taken place) should be excluded. Railroad tracks and major drainage features (e.g., rivers, creeks, lakes) must also be shown, and the names of each of these features indicated. Additional features or symbols (e.g., churches, schools, factories) should be limited or excluded altogether. The following should be excluded totally from the map: underground utility lines, land use and zoning symbols or shading, symbols for vegetation cover, topographic contour lines, and similar items that obscure the basic street pattern and names. All features, names, titles, and symbols must be clearly shown and legible.

3. Coverage. Maps must include the entire area of the incorporated place. If possible, a fringe area of at least one quarter mile outside the corporate boundary should be shown, with the same detail as the incorporated area.

as the incorporated area. 4. Corporate boundary. The current corporate boundary must be shown on the map. Where the corporate boundary and the precinct boundary coincide, the mutual boundary should be shown as a single green line; where they do not, precinct boundaries as to be shown by a single red line. The effective date (day/month/year) of the current boundary, if different from that in effect on January 1, 1970, must be specified on the map. 5. Coincident incorporated place and precinct boundaries. For incorporated places which have precinct boundaries that coincide with the corporate boundaries, and undergo boundary changes (e.g., annexations or detachments), a map showing revised precinct boundaries must be submitted (see I.H.). Places which consist entirely of only one precinct, and which will continue to coincide with only one precinct, may be shown on a separate list, no maps need to be submitted for such places.

need to be submitted for such places. 6. Date. The map should indicate the date (month/year) of the base map or, if the map has been updated, the date (month/year) of the latest revision. The date of the current corporate boundaries described in II.B.4. must also be shown. C. Maps of Minor Civil Divisions

C. Maps of Minor Civil Divisions (townships, towns, magisterial districts, etc.). A separate map of an MCD is required; only if the precinct boundaries cannot be shown clearly on the county map. Separate maps must be keyed to the county map as noted in II.A.4. Each MCD map must show the State and county name in which it is located. Depending on the density and extent of the street and road pattern, the size, scale, and map features for MCD maps must follow the map specifications given above for either counties or incorporated places. D. Maps of areas with dense street or

D. Maps of areas with dense street or road pattern. Areas with dense street or road pattern, but outside corporate limits and not shown on MCD maps, must be shown on separate maps if they contain precinct boundaries. Such maps must be keyed to the county maps by the "Inset A," "Inset B," etc., identification scheme as noted in II.A.4., and must also show the State and county name in which they are located.

111. Map Sources. County and, in many cases, city, town, and village maps are generally available from your State highway department or department of transportation. If maps are not available from such State or local sources, please contact the State coordinating office expected to be established by each participating State.

IV. Retention of Maps. At least one copy of all precinct maps provided to the Census Bureau should be retained by the State coordinating agency.

Dated: March 26, 1976

VINCENT P. BARABBA, Director, Bureau of the Census.

[FR Doc. 76-9156 Filed 3-30-76:8:45 am]

Bureau of the Census

1990 Census: Block Boundary Suggestion Project; Establishment

Before establishing the full criteria specified under Pub. L. 94-171 (13 U.S.C. 141), the Director of the Bureau of the Census is announcing the Block Boundary Suggestion Project (BBSP), one component of the 1990 census Pub. L. 94-171 program. This announcement provides information for the "... officers or public bodies having initial responsibility for legislative apportionment or districting of each state..." (or their designee) who wish to participate in the BBSP.

These guidelines for state participation in the BBSP have been provided to the Governor, Secretary of State, and legislative leaders of each state. Copies of these guidelines are available on request from the Director, Bureau of the Census, Washington, D.C. 20233.

Under the provisions of Pub. L. 94-171, the Census Bureau must provide each state with 1990 census population counts for legislative reapportionment/redistricting. In addition to counts by standard geographic areas (counties, minor civil or census county divisions, places, census tracts, and census blocks nationwide). the Census Bureau will provide population counts for voting districts by aggregating data for census blocks for those participating states that meet the criteria issued by the Census Bureau for the 1990 census Pub. L. 94-171 program. The BBSP component of this program gives states the opportunity to suggest certain visible features for the Census Bureau to use as block boundaries for the 1990 census if such features meet the guidelines issued by the Census Bureau.

If a state plans to participate in the BBSP, we are asking the Governor, Secretary of State, and legislative leadership to designate jointly a contact person with whom Census Bureau staff will communicate for this Project. The final deadline for participation in the BBSP is July 31, 1985.

In early 1986 we will announce the full set of criteria for the 1990 census Pub. L. 94-171 program. Participation in the BBSP is not a prerequisite for participation in the other elements of the Pub. L. 94-171 program. An outline of the tentative elements of the 1990 census Pub. L. 94-171 program follows:

1. Through the BBSP, in 1985 and 1986 the state can suggest features to be held as 1990

census block boundaries that will increase the coincidence of 1990 census blocks with state voting districts (VTDs). The state need take no further action until 1991. At that time, the Census Bureau will provide the state with redistricting counts for standard census tabulation areas, including census blocks¹ statewide.

2. During 1985 and 1986 the state can participate in the BBSP. During late 1988 and 1989 the state can delineate boundaries around groups of whole census blocks¹ comprising its VTDs on Census Bureau block-numbered maps. The Census Bureau then includes these VTD lines in its 1990 geographic system and provides the state with redistricting counts for VTDs, VTD equivalents, other standard census tabulation areas, and census blocks¹ statewide in 1991.

3. The state may decide not to participate in the BBSP but to submit VTD boundaries bounding groups of whole census blocks¹ on block-numbered maps in 1988-1989. In 1991 the Census Bureau furnishes the state with redistricting counts for VTDs, VTD equivalents, other standard census tabulation areas, and census blocks¹ statewide.

4. The state takes no part in the 1990 Pub. L. 94-171 program and, in 1991, the Census Bureau provides redistricting counts for standard census tabulation areas and census blocks¹ state-wide.

Both the BBSP component and the full Pub. L. 94-171 program are voluntary, and a state may choose to limit its participation to only selected counties. Address questions concerning the Pub. L. 94-171 program or the BBSP to the Director, U.S. Bureau of the Census, Washington, D.C. 20233.

Dated: April 22, 1985. John G. Keane, Director, Bureau of the Census. [FR Doc. 85-10022 Filed 4-24-85; 8:45 am] BILLING CODE 3510-07-M

¹Plus parts of blocks split by standard census tabulation areas.

Appendix B. Official Recipients of the 1990 Census P.L. 94-171 Counts*

State	Recipient	State	Recipient
Alabama	Mr. Mark D. Hess Assistant Legal Advisor to Governor	Connecticut	Mr. Theron A. Schnure Connecticut Census Data Center Office of Policy and Management
	Ms. Marilynn Akers Terry Staff Director Reapportionment Office		Mr. Kimball Brace Election Data Services, Inc.
 Alaska	Mr. Charles R. Caldwell		Mr. L. Allan Green Director, Office of Legislative Research
	Chief, Research and Analysis Department of Labor		Honorable John B. Larson Senate President Pro Tem
	Mr. Warren Endicott Alaska Legisłative Affairs Agency		Honorable M. Adela Eads Senate Minority Leader
Arizona	Ms. Linda Strock Manager, Population Statistics Unit		Honorable Richard J. Balducci Speaker of the House
	Department of Economic Security		Honorable Ed Krawiecki House Minority Leader
	Mr. Donald W. Jansen Director, Arizona Legislative Council	Delaware	Mr. Douglas M. Clendaniel Delaware Development Offic
Arkansas	Mr. Field K. Wasson, Jr. Office of the Governor		Mr. Russell Larson Office of Controller General
	Honorable W. J. "Bill" McCuen Secretary of State	District of Columbia	Ms. Toni M. Perry Committee of the Whole DC City Council
	Ms. Donna Davis Joint Interim Committee on		Mr. Nathan Levy Director, Data Management Division
	State Agencies and Governmental Affairs	Florida	Mr. Steve Kimble Executive Office of the Governor
California	Ms. Linda Gage Demographic Research Unit		Mr. John Guthrie Senate Committee on Reapportionment
	Mr. Dave Reiss Senate Rules Committee		Honorable Ander Crenshaw Senate Republican Leader
	Demographic Office Honorable Ken Maddy		Mr. George Meier House Committee on Reapportionment
	Senate Republican Leader Ms. Tammy Metropolis		Mr. Larry Churchill Executive Assistant to the House Republican Office
	Office of the Speaker Mr. Jim Nygren Assembly Republican Caucus	Georgia	Mr. Robert Giacomini Director, Operational Support and Development Division
Colorado	Mr. Hal Knott Director, Colorado Division of Local Government		Mr. Thomas M. Wagner Director, Demographic and Statistical Services Division
	Ms. Delores Lanier Colorado Legislative Council		Ms. Linda D. Meggers Director, Georgia General Assembly Redistricting Unit

State	Recipient	State	Recipient
Hawaii	Mr. Neil Miyahira Office of the Lieutenant Governor	Kansas	Mr. Bill Graves Secretary of State
	Honorable Richard S. H. Wong President of the Senate		Mr. Richard W. Ryan Director, Legislative Research Department
	Honorable Mary George Senate Minority Leader	Kentucky	Mr. Bob Leonard Department of Local Government
	Honorable Daniel J. Kihano Speaker of the House		Ms. Joyce Honaker Legislative Research Commission
	Mr. George Akahane Reapportionment Commission	Louisiana	Ms. Karen Paterson State Demographer
Idaho	Mr. Marc Johnson Office of the Governor		Mr. Glenn Koepp Assistant Secretary of the Senate
	Ms. Jeanne Fitzgerald Legislative Council	Maine	Mr. Richard Sherwood State Planning Office
Illinois	Mr. Michael Belletire		Ms. Sarah C. Tubbesing Executive Director of Legislative Counc
	Executive Assistant for Program Development Office of the Governor	Maryland	Mr. Ronald Kreitner Director, Maryland Office of Planning
	Mr. William G. Holland Chief of Staff Office of Senate President		Mr. F. Carvel Payne Director, Maryland Department of Legislative Reference
	Mr. Kimball Brace	Massachusetts	Mr. William Murray 1990 Redistricting Data Liaison
	Election Data Services, Inc. Mr. Timothy D. Mapes Special Assistant	Michigan	Mr. Eric Swanson Office of Demographic Research & Statistics
	Office of the Speaker Mr. Dan Donahue		Ms. Denise Haugen Senate Republican Caucus
 Indiana	Office of Senate Minority Leader Ms. Roberta Eads	_	Mr. Mike Vatter Senate Minority Caucus
	Indiana State Data Center Mr. Philip J. Sachtleben		Mr. Mark Hoffman Director, House Republican Office
	Office of Bill Drafting & Research		Mr. Ed Sarpolus House Majority Caucus
	Mr. Paul Apollo Geographic Data Technology	Minnesota	Mr. R. Thomas Gillaspy State Planning Agency
Iowa	Ms. Beth Henning State Library of Iowa		Mr. Charles J. McCarty System Administrator
	Mr. Kimball Brace Election Data Services, Inc.	Mississippi	Mr. Mike Goff Director of Legislation & Programs
	Mr. Gary L. Kaufman Senior Legal Advisor Legislative Services Bureau		Honorable Hubbard T. Saunders, IV Joint Legislative Committee on Reapportionment

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State	Recipient	State	Recipient
Missouri	Mr. Ryan Burson State Demographer	New York	Mr. Robert Scardamalia N.Y.S. Dept. of Economic Development
	Mr. Dennis Coons Missouri Senate		Honorable Manfred Ohrenstein State Senator
	Mr. Bryan Long House Research Staff		Honorable Clarence D. Rappleyea Assembly Republican Conference
	Honorable Tom McCarthy Minority Floor Leader		Ms. Debra Levine & Mr. Lewis Hoppe Legislative Task Force on Demographic Research and Reapportionment
Montana	Ms. Patricia Roberts Census & Economic Information Center		Honorable Dean Skelos New York State Senate
	Mr. David D. Bohyer Director, Research and Reference		Honorable Melvin H. Miller Speaker of the Assembly
Nebraska	Services Division Mr. Charles C. Taylor	North Carolina	Ms. Francine J. Stephenson State Data Center
	Administrator, Central Data Processing		Mr. Terrence D. Sullivan Director of Research
	Ms. Pat Hammond Legislative Research Division	North Dakota	Ms. Carol M. Siegert Administrative Assistant
Nevada	Ms. Betty McNeal State Data Center		Mr. John D. Olsrud Director, Legislative Council
	Mr. Brian L. Davie Research Division, Legislative Counsel Bureau		Mr. Floyd Hickok Department of Geography
	Mr. Steve Edwards	Ohio	Mr. Mike Dawson Executive Assistant
	Office of the Governor Ms. Becky Phyllides Deputy Speaker's Office		Mr. Thomas Manuel Acting Director, Legislative Service Commission
New Jersey	Ms. Stavroula Lambrakopoulos Director, New Jersey Washington Office		Ms. Margaret Johnson House Legal Counsel
	Mr. Harold Berkowitz Office of Legislative Services		Mr. James R. Tilling Chief Executive Officer The Ohio Senate
	Honorable John H. Dorsey Senate Minority Leader	Oklahoma	Ms. Karen Selland Oklahoma State Data Center
	Ms. Michelle Sobolewski Assembly Majority Office		Ms. Lexa Treps Assistant Director for Committee Staff
	Honorable Garabed "Chuck" Haytaian Assembly Republican Office		Ms. Nancy Marshment Research Analyst House of Representatives
	Mr. Philip M. Keegan State Chairman, New Jersey		Honorable Joe Heaton Minority Floor Leader
New Mexico	Mr. Bill King Office of the Governor	Oregon	Honorable Phil Keisling Secretary of State
	Ms. Paula Tackett Legislative Council Service		Mr. Dale Claudel Oregon Legislative Information Systems

State	Recipient	State	Recipient
Pennsylvania	Mr. Michael T. Behney Director, State Data Center	Texas	Ms. Susan Albers Office of General Counsel to the Governor
	Mr. Michael S. Long Majority Staff Administrator		Ms. Deborah Irvine Director of Special Projects Texas Legislative Council
	Mr. Mark McKillop Democratic Leader's Office Senate of Pennsylvania		Honorable Tom Craddick Texas Fair Redistricting Committee
	Mr. Scott Casper Executive Director, Office of Reapportionment House of Representatives	Utah	Mr. Brad T. Barber Director, Demographic and Economic Analysis Section Office of Planning and Budget
	Mr. Roger E. Nick Republican Leader's Office House of Representatives		Mr. Richard V. Strong Director, Office of Legislative Research & General Counsel
Rhode Island	Mr. Paul Egan Office of Municipal Affairs	Vermont	Mr. Thomas Moore Office of the Governor
	Mr. James J. Creamer Executive Director, Joint Committee		Mr. Don Dickson Legislative Council
	on Legislative Services	Virginia	Mr. Daniel G. Jones Virginia Employment Commission
South Carolina	Mr. Mark R. Elam Senior Legal Counsel Office of the Governor		Dr. R. J. Austin Special Projects Director Division of Legislative Services
	Mr. Michael N. Couick Director of Research and Attorney to Judiciary Committee	Washington	Mr. Hal Lymus Elections Division Office of Secretary of State
	Honorable Robert J. Sheheen Speaker of the House		Ms. Jennifer Helget State Redistricting Commission
	Honorable Terry E. Haskins House Minority Leader	West Virginia	Mr. Thomas A. Heywood Senior Executive Assistant Governor's Office
South Dakota	Ms. Shelley Stingley Special Assistant to the Governor		Ms. Anne Ferguson Legislative Services
	Mr. Terry Anderson South Dakota Legislative Research Council	Wisconsin	Mr. Ted Kanavas Wisconsin Department of Administration
Tennessee	Mr. Charles Brown Tennessee State Planning Office		Mr. Donald J. Schneider Office of the Senate Chief Clerk
	Mr. Robert Mathis Director, M.I.S. for General Assembly	Wyoming	Ms. Mary Byrnes DAFC, Research & Statistics Div.
	Mr. Tom Fleming Office of Local Government		Mr. Richard H. Miller Director, Legislative Service Office

State	Recipient
Puerto Rico	Honorable Rafael Hernandez-Colon Governor President, PDP
	Honorable Pedro Rosello President, NPP
	Honorable Ruben Berrios-Martinez President, PIP
	Honorable Victor M. Pons, Jr. Chief Justice, Supreme Court
	Honorable Marios Rodrigues Estrada President, Comision Estatal de Elecciones
	Honorable Edualdo Baez-Galib, Esq., PDP Comision Estatal de Elecciones
	Honorable Francisco Gonzalez Rodriguez, PNP Comision Estatal de Elecciones
	Honorable Manuel Rodriguez-Orellana, Esq., PIP Comision Estatal de Elecciones
	Lic. Virgilio Ramos-Gonzalez, NPP Comision Estatal de Elecciones
*Some states se	

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Appendix C. Redistricting Software Vendors*

Analytical Surveys 1935 Jamboree Drive Colorado Springs, CO 80120 303-593-0093

AT&T Digital Records System Two Gateway Center Newark, NJ 07102 201-468-6000

Caliper Corporation 1172 Beacon Street Newton, MA 02161 617-527-4700

Criterion Corporation 1256 High Bluff Drive San Diego, CA 92130 619-455-0162

Deltasystems 2629 Redwing Road #330 Fort Collins, CO 80526 303-226-3283

Digital Equipment Three Results Way MR03-2/E7 Marlboro, MA 01752 (currently inactive)

Economical Reapportionment 20 Elm Drive Pittsburgh, PA 15238 412-281-9802

Election Data Services 1522 K Street, NW Suite 262 Washington, DC 20005 202-789-2004

Environmental Systems Research Institute 380 New York Street Redlands, CA 92373 714-793-2853

GeoDisTrictTM Geographic Data Technology, Inc. 13 Dartmouth College Highway Lyme, NH 03768 603-795-2183 Fax: 603-795-2115 GeoVision Corporation 1600 Carling Avenue, Suite 350 Ottawa, Ontario Canada K17 8R7 613-722-9518

Hewlett Packard 300 Hanover Street 20 BY Palo Alto, CA 94304 415-857-2857

IBM Public Sector 10401 Fernwood Road Bethesda, MD 20817 (currently inactive)

IMI 1500 Broadway, 16th Floor New York, NY 10036 212-944-1555

Intergraph Corporation One Madison Industrial Park Huntsville, AL 35807-4201 205-772-2222

Keystone Management Systems, Inc. 522 East College Avenue, Suite 200 P.O. Box 10830 State College, PA 16801-5538 814-234-6264 Fax: 814-234-6234

Logistic Systems Incorporated 1024 South Avenue West Missoula, MT 59801 406-728-0921

MapInfo Hendrick Hudson Building 200 Broadway Troy, NY 12180 518-274-8673

Market Opinion Research 243 West Congress Detroit, MI 48226

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Sammamish Data Systems, Inc. 1813 130th Avenue, NE, Suite 218 Bellevue, WA 98008 206-867-1485

Sun Microsystems Federal, Inc. 2550 Gracia Avenue, M/S M3-91 Mountain View, CA 94043 408-945-3411

Synercom 10405 Corporate Drive Sugar Land, TX 77478 713-240-5000

Terra-Mar Resources Information 2937 Landings Drive Mountain View, CA 94043 415-964-6900

Wang Laboratories, Inc. 1 Industrial Avenue M/S 019-020 Lowell, MA 02851 508-967-7044

Wild Heerburg Systems 373 Inverness Drive, S., Suite 207 Englewood, CO 80112 303-799-9453

Woolpert Consultants 409 E. Monument Avenue Dayton, OH 45402-1226 513-461-5660

*Vendors attending the Fall 1987 NCSL Apportionment Task Force meeting, New Haven, Connecticut

Appendix D. NCSL Attendees—Assembly on the Legislature Kansas City, Missouri (May 29, 1992)

Reapportionment Task Force Members

State	Name	Organization
Alabama	Jerry Bassett Bobbie McDowell Marilyn Akers Terry	House House Reapportionment Office
Arizona	Jane Dee Hull John D. Thomas	House House
Colorado	Tim Storey	National Conference of State Legislatures
District of Columbia	Kim Brace George Bullock Shari Jackson Robert LaMacchia Dale Oldham Ed Pike Marshall L. Turner, Jr.	Election Data Services Edison Electric Institute Society of the Plastics Census Republican National Committee Census Census
Florida	George H. Meier	House
Georgia	Ray Argo Linda Meggers Penny Williams	University of Georgia General Assembly General Assembly
Kansas	Mary Galligan Vince Snowbarger Mary Torrence Ben Vidricksen	Legislative Research Department Holbrook, Heaven, & Faye Law Offices Reviser of Statutes Office Senate
Kentucky	Joyce Crofts Joyce S. Honaker Clint Newman	Legislative Research Legislative Research Legislative Research
Minnesota	Peter Wattson	Senate
Ohio	Susan Kyte Cathy Tilling James R. Tilling	Secretary of State's Office Senate Senate
Oklahoma	Lexa Treps	Senate
South Carolina	Michael N. Couick	Senate
South Dakota	Jerome B. Lammers Roberta Rasmussen	House Senate
Texas	Clare Dyer	Texas Legislative Council
Washington	Jennifer Helget	State Redistricting Commission
West Virginia	Melissa Baker Teresa Bowe David A. Ellis Anne V. Ferguson	Legislative Services Legislative Services Legislative Services Legislative Services
Wisconsin	Larry Barish	Legislative Reference Bureau

Appendix E. NCSL Attendees—1992 Annual Meeting Cincinnati, Ohio (July 26, 1992)

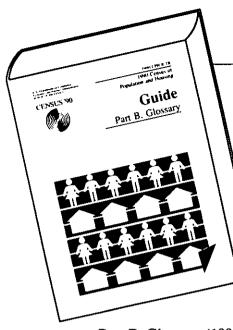
Reapportionment Task Force Members

State	Name	Organization
Alaska	Terry Martin	House
Colorado	Gary Schaefer Richard Stausburg	Public Systems Associates Public Systems Associates
District of Columbia	Kim Brace Robert LaMacchia Cathy McCully Marshall L. Turner, Jr. Jeff Wice	Election Data Services Census Census Census Counsel, NY Assembly
Indiana	John W. Donaldson	House
Kentucky	Joseph Fischer	Legislature
Maryland	Clifford Collins	National Association for the Advancement of Colored People (NAACP)
Michigan	Ed Sarpolus	House
Minnesota	Peter Wattson	Senate Counsel
Mississippi	Steve Miller	Joint Legislative Committee on Reapportionment
Nevada	Scott G. Wasserman	General Assembly
New York	Debra Levine	Legislative Task Force on Demographic Research and Reapportionment
North Carolina	Gerry Cohen Kelly Stallings	General Assembly General Assembly
Ohio	Charles Horn Fred Horn B. Montgomery Cathy Tilling James R. Tilling	Senate Senate Senate Senate Senate Senate
Oklahoma	Kay Daley Douglas McClure Lexa Treps	Senate Senate Senate
South Carolina	David Barden	Senate
Tennessee	Tom Fleming Robert E. Mathis	Office of Local Government General Assembly
Texas	Diane Mazuca	Senate Research Center
Virginia	Roman K. Rice	Public Service Research
West Virginia	Melissa Baker Teresa Bowe Anne V. Ferguson	Legislative Services Legislative Services Legislative Services
Wisconsin	Brenda Haskins Gwendolyn LaCroix Rex Loehe	Assembly Democratic Caucus Legislative Fiscal Manager Senate Democratic Caucus

Appendix F. NCSL Attendees—Assembly on the Legislature Raleigh, North Carolina (November 14, 1992)

Reapportionment Task Force Members

State	Name	Organization
Alabama	Marilyn Akers Terry	Reapportionment Office
Connecticut	Jeffrey Greenfield	House of Representatives
District of Columbia	Kim Brace Tom Coughlin Jim Dinwiddie Jon Felde Jennifer Helget Robert LaMacchia Cathy McCully	Election Data Services Census Census National Conference of State Legislatures Election Data Services Census Census
Idaho	Mark Ricks	Senate
Kansas	Mary Galligan Mary Torrence	Legislative Research Revisor of Statutes
Kentucky	Joyce Honaker Danny Jackson	Legislative Research Commission Legislative Research Commission
Louisiana	Glenn Koepp	Senate
Minnesota	Peter Wattson	Senate Counsel
Mississippi	Steve Miller	Joint Legislative Committee on Reapportionment
New York	Debra Levine Frank Schellace	Legislative Task Force on Reapportionment Supreme Court-Attorney
North Carolina	Gerry Cohen Bill Gilkeson Kelly Stallings Terry Sullivan Dennis J. Winner	General Assembly Legislative Services General Assembly General Assembly Senate
Ohio	Cathy Tilling James R. Tilling	Senate Senate
Oklahoma	Douglas McClure	Senate
Tennessee	Tom Fleming Ellen Tewes	Office of Local Government General Assembly
Texas	Clare Dyer	Legislative Council
Virginia	Jack Austin Mary Spain	Legislative Services Legislative Services
West Virginia	Melissa Baker Teresa Bowe	Legislative Services Legislative Services
Wisconsin	Larry Barish	Legislative Reference Bureau



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