

# REAPPORTIONMENT



*Bulletin No. 91-12*

LEGISLATIVE COMMISSION  
OF THE  
LEGISLATIVE COUNSEL BUREAU  
STATE OF NEVADA

JANUARY 1991



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Assembly Concurrent Resolution No. 15--Committee on Elections

FILE NUMBER...176

ASSEMBLY CONCURRENT RESOLUTION--Directing the Legislative Commission to study the requirements for reapportionment in Nevada before the legislature convenes in 1991.

WHEREAS, The 66th session of the Nevada Legislature will be required to reapportion the election districts for the members of the legislature, Nevada's members in the United States House of Representatives, the board of regents of the University of Nevada System and the state board of education; and

WHEREAS, The Bureau of the Census of the United States Department of Commerce is required to deliver redistricting data from the decennial census in 1990 to the states not later than April 1, 1991, when the Nevada Legislature already will be in session; and

WHEREAS, The Bureau of the Census will number the entire nation by blocks for the census in 1990 and the number of blocks in this state will increase from 8,965 in 1980 to an estimated 51,700 blocks in 1990; and

WHEREAS, This increase in the amount of data from the census in 1990 and the necessity to accomplish reapportionment in an expeditious manner during the 1991 session will require additional computer software and extensive preparation and testing to allow for the generation and analysis of proposals concerning reapportionment; and

WHEREAS, The reapportionment and the statistical analysis of the data must comply with current case law and the legal requirements for redistricting; and

WHEREAS, The Nevada Legislature since 1985 has been working with the Bureau of the Census on the Block Boundary Suggestion Program and other programs in preparation for the census in 1990 and the redistricting process; now, therefore, be it

RESOLVED BY THE ASSEMBLY OF THE STATE OF NEVADA, THE SENATE CONCURRING, That the Legislative Commission is directed to study the requirements for reapportionment in this state in conjunction with the data from the decennial census of 1990; and be it further

RESOLVED, That the study include:

1. A continuing examination and monitoring of any redistricting systems established or recommended by the 65th session of the Nevada Legislature to be established to accomplish reapportionment, including the requirements for computer equipment and computer software and the training of personnel;

2. A review of the case law concerning the legal requirements for redistricting;

3. A review of the programs concerning planning for reapportionment in other states;

4. The continuation of the state's participation in the programs of the Bureau of the Census; and

5. The participation in a program of the Bureau of the Census to increase the awareness of the general public concerning the census to ensure a complete and accurate count of all Nevadans in 1990; and be it further

RESOLVED, That the Legislative Commission may enter into contracts or other necessary agreements to establish and test redistricting programs and

computer equipment to provide for the timely and efficient commencement of data processing for reapportionment before the legislature convenes in 1991; and be it further

RESOLVED, That the Legislative Commission report to the 66th session of the Nevada Legislature the results of the study, any action taken in preparation for reapportionment and any recommendations concerning redistricting.

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## REPORT OF THE LEGISLATIVE COMMISSION

TO THE MEMBERS OF THE 66TH SESSION OF THE NEVADA LEGISLATURE:

This report is submitted in compliance with Assembly Concurrent Resolution No. 15 of the 65th session of the Nevada Legislature. This resolution directs the Legislative Commission to study the requirements for reapportionment in this state in conjunction with the data from the decennial census of 1990.

The Legislative Commission appointed a subcommittee to conduct this study. Legislative members of the subcommittee were:

Assemblywoman Jan Evans, Chairman  
Senator Ann O'Connell, Vice Chairman  
Senator Dean A. Rhoads  
Senator Dina Titus  
Senator Sue Wagner  
Assemblywoman Renee L. Diamond (July 1989 to November 1990)  
Assemblyman Joan A. Lambert  
Assemblyman Gary A. Sheerin (July 1989 to November 1990)  
Assemblyman Bob Price (November 1990 to January 1991)  
Assemblywoman Myrna T. Williams (November 1990 to January 1991)

Legislative Counsel Bureau staff services for the subcommittee were provided by Brian L. Davie of the Research Division (principal staff), Scott G. Wasserman of the Legal Division (legal counsel), Fred Dugger and Kathy Steinle of the Data Processing Section (computer services), and Sondra Amodei and Lyndl L. Payne of the Research Division (subcommittee secretary).

In this report, the subcommittee has attempted to provide a comprehensive review of the issues related to reapportionment. Only that information which bears directly upon the scope of the study and the subcommittee's recommendations is included. All other supporting documents and minutes of meetings are on file with the Research Library of the Legislative Counsel Bureau.

This report is transmitted to the members of the 1991 Legislature  
for their consideration and appropriate action.

Respectfully submitted,

Legislative Commission  
Legislative Counsel Bureau  
State of Nevada

Carson City, Nevada  
January 1991

\* \* \* \* \*

LEGISLATIVE COMMISSION

Assemblyman John E. Jeffrey, Chairman  
Assemblyman Robert M. Sader, Vice Chairman

Senator Charles W. Joerg	Assemblyman Louis W. Bergevin
Senator William R. O'Donnell	Assemblyman Joseph E. Dini, Jr.
Senator Raymond C. Shaffer	Assemblyman James W. McGaughey
Senator Randolph J. Townsend	Assemblyman Danny L. Thompson
Senator John M. Vergiels	

## SUMMARY OF RECOMMENDATIONS

This summary presents the recommendations to the 66th session of the Nevada Legislature by the Legislative Commission's Subcommittee on Reapportionment.

The subcommittee recommends:

1. That, early in the 1991 session, the Senate Committee on Government Affairs and the Assembly Committee on Legislative Functions and Elections adopt redistricting rules in accordance with the document entitled "Proposed Rules for Redistricting by the Nevada Legislature."
2. That, as soon as practicable in the 1991 session, the Senate Committee on Government Affairs and the Assembly Committee on Legislative Functions and Elections agree and make a decision on the aggregate number of members of the Nevada Legislature for redistricting.
3. That the Nevada Legislature remain under its current 63-member configuration for redistricting in 1991.
4. That the Nevada Legislature accomplish redistricting during the 1991 session with the Public Law 94-171 data. If a decision is made after adjournment of the 1991 session to adjust the 1990 census, the Legislature should direct staff to evaluate the changes in the census data and monitor any resulting litigation to provide an analysis of the adjustment decision and its effects on Nevada's redistricting plans. This analysis should be provided to legislative leadership and the Governor to assist in determining the need for and length of a special session to make any necessary modifications.
5. That the Legislative Commission provide oversight and staff guidance on future development and applications of the Nevada Legislature's Geographic Information System after completion of the 1991 session and the redistricting process.
6. That the appropriate standing committees of the 1991 Legislature provide due and careful consideration to any proposals to amend the laws pertaining to access to public information as they relate to the development of geographic information system technology in Nevada's government sector.



REPORT TO THE 66TH SESSION OF THE NEVADA LEGISLATURE  
BY THE LEGISLATIVE COMMISSION'S SUBCOMMITTEE  
TO STUDY REAPPORTIONMENT

I. INTRODUCTION

The 1989 Legislature adopted Assembly Concurrent Resolution No. 15 (File No. 176) which directed the Legislative Commission to study the requirements for reapportionment in this state in conjunction with the data from the decennial census of 1990. The resolution directed that the study include monitoring of the development of the Legislature's computer redistricting system, a review of the legal requirements for redistricting, a review of the planning programs for reapportionment in other states, and the continuation of the state's participation in programs of the United States Bureau of the Census relating to the 1990 census.

Previous reports concerning the Nevada Legislature's participation in the Census Bureau's Block Boundary Suggestion Program (BBSP) include Legislative Counsel Bureau (LCB) Bulletin No. 87-15, *Study Of Boundaries For Blocks For Census In 1990*, dated August 1986 and LCB Bulletin No. 89-1, *Study Of Block Boundaries For 1990 Census*, dated November 1988.

The subcommittee intends this report to serve as a primer on reapportionment. It includes a comprehensive review of the legal and technical issues relating to redistricting, along with an overview of the activities and recommendations of the subcommittee.

II. SUBCOMMITTEE ACTIVITIES

The A.C.R. 15 Subcommittee on Reapportionment held four meetings as follows: January 25, 1990, in Carson City; June 18, 1990, in Las Vegas; September 6, 1990, in Reno; and November 26, 1990, in Las Vegas.

The subcommittee was active in promotion and monitoring of the 1990 census, the census adjustment issue, promotion of the Postcensus Local Review Program, legal and technical issues relating to redistricting, and staff and contractor activities in the development of the Nevada Legislature's Geographic Information System (GIS) for the redistricting application.

The subcommittee also sponsored publication of the *Reapportionment Newsletter* to help inform and educate legislators and the public about the census and redistricting issues, as well as to report on the work of the subcommittee. Six issues of the newsletter, comprising Volume 1, were published from November 1989 to December 1990. Appendix A provides a summary list of the issues and topics covered in each newsletter. Copies of the various issues of *Reapportionment Newsletter* are available at no charge from the Research Division of LCB.

This report contains and consolidates most of the information presented in the newsletters. A special issue of *Reapportionment Newsletter*--Volume 1, No. 3, dated May 23, 1990--was devoted to the history of reapportionment and redistricting in Nevada. This issue is reproduced in Appendix B to make the historical information available for reference purposes in this document.

### III. MAJOR CHANGES FOR 1990 CENSUS AND REDISTRICTING

Four major changes for the 1990 census have occurred which make the census and redistricting processes more complex and provide additional opportunities for better use of the collected data. These changes include increased data, computer mapping with the Topologically Integrated Geographic Encoding and Referencing System (TIGER), enhanced computerization and legal developments.

#### A. INCREASED DATA

Increased data results from the decision by the United States Census Bureau to block number the entire Nation for the 1990 census. Large enumeration districts in the rural areas no longer will be used. In 1980, census tabulation blocks in Nevada were used only in the urban areas of Las Vegas and Reno. In 1990, census blocks will be used throughout the state, although some in the rural areas will continue to encompass large areas of land. The number of census blocks for Nevada will increase from 8,965 blocks in 1980 to an estimated 30,000 blocks or more in 1990.

#### B. COMPUTER MAPPING

The Census Bureau has developed the TIGER system for the 1990 census. This system is a new digital (computer readable) map data base that automates the mapping and related geographic activities to support the census and survey programs of the Census Bureau. It contains data for all 1990 census map features, collection geography and

political boundaries. This system alone is a major advancement which will allow the use of computer mapping techniques for redistricting and other uses through the application of geographic information system software.

#### C. COMPUTER TECHNOLOGY

Major changes and improvements in computer technology make the census data and reapportionment process accessible to more people and groups. These changes include the development of computer graphics, the growth of database management tools and the availability of personal computers. These factors will allow more groups and individuals to generate their own plans and use the census data through computer-assisted techniques.

#### D. LEGAL DEVELOPMENTS

The final major change for the 1990's relates to legal developments which include strict standards for population equality, the 1982 amendments to the Voting Rights Act and a 1986 U.S. Supreme Court decision on political gerrymandering.

##### 1. Population Equality

United States Supreme Court decisions in the 1980's clarified and established strict standards for population equality in congressional and state legislative districts.

Seats in both houses of a bicameral state legislature must be apportioned on a population basis. An apportionment plan will withstand a constitutional challenge if the plan only has minor deviations in population between districts. In 1983, the U.S. Supreme Court decided Brown v. Thomson, 103 S.Ct. 2690, in which the Court held that, as a general matter, an apportionment plan with a maximum population deviation under 10 percent falls within the category of "minor deviations."

The equal protection standard for congressional districts has been strictly construed. In Westbury v. Sanders, 376 U.S. 1 (1964), the U.S. Supreme Court held that the population of congressional districts in the same state must be " \* \* \* as nearly equal as practicable." Any population deviation among congressional districts, no matter how small, may render a reapportionment plan unconstitutional if a plaintiff can show that an alternative plan was presented, and could have been adopted, which would have resulted in a lower total population deviation and the state fails to

demonstrate a legitimate state objective necessitating the deviation [see Karcher v. Daggett, 462 U.S. 725 (1983)].

## 2. Amendments to the Voting Rights Act

Congress amended Section 2 of the Voting Rights Act in 1982 to reduce the burden of proof necessary to establish a Section 2 violation. Previously, a plaintiff had to show that a challenged electoral plan was intentionally designed or maintained for a discriminatory purpose.

The 1982 amendments eliminated the intent requirement. As a result, to prove a Section 2 violation, plaintiffs need only demonstrate that a challenged practice or structure results in discrimination against a minority group.

## 3. Decision on Political Gerrymandering

A U.S. Supreme Court decision (Davis v. Bandemer) in 1986 ruled that political gerrymandering is a justiciable issue. In other words, a precedent now exists for persons or groups to challenge legislative redistricting plans in court by claiming that a political group was intentionally and actually discriminated against in the reapportionment process.

According to one national expert, these changes and particularly the Court decision on political gerrymandering will make reapportionment "the growth industry of the 1990's" and almost every state will face some type of court challenge on its redistricting plans.

National experts on reapportionment contend that state legislatures should protect themselves against potential court challenges of their plans by having sufficient election and voter registration data to compare the effects of their redistricting plans. The Court decision indicated that at least three election cycles should be considered in a political gerrymandering case. For this reason alone, state legislatures, in 1991 more than ever, need to use the enhanced computer techniques and data available to evaluate the effects of their redistricting decisions.

## IV. LEGAL REQUIREMENTS FOR REDISTRICTING

The major legal requirements for redistricting have evolved primarily through case law since the 1960's. This section summarizes the provisions in the *Nevada Constitution* relating to reapportionment and the current legal environment of redistricting as established through

decisions of the U.S. Supreme Court. A complete and detailed treatment of redistricting legal requirements is found in a publication entitled *Reapportionment Law: The 1990s*, by the Reapportionment Task Force of the National Conference of State Legislatures (NCSL), which is available in the Research Division of LCB.

#### A. NEVADA'S CONSTITUTIONAL REQUIREMENTS

Only a few provisions of the *Constitution of the State of Nevada* relate directly to the method of reapportionment in this state.

##### *Representation Apportioned According to Population*

Section 13 of Article 1 of the *Nevada Constitution* requires representation to be apportioned according to population. The purpose of this section is to secure to the citizen equal representation in the making of the laws of this state. [*State ex rel. Winnie v. Stoddard*, 25 Nev. 452, 62 Pac. 237 (1900)]

##### *Census to Serve as Basis of Representation*

Section 13 of Article 15 of the *Nevada Constitution* provides that the census taken under the direction of the U.S. Congress every 10 years shall serve as the basis of representation in both houses of the Legislature.

##### *Reapportionment at First Regular Session Following Census*

Section 5 of Article 4 requires that, after each decennial census of the United States, the Legislature shall fix by law the number of Senators and Assemblymen and apportion them among the several counties of the state or among legislative districts established by statute, according to the number of inhabitants in them respectively.

Interpreting the provisions of this section, Nevada's Office of the Attorney General has indicated that the Legislature must reapportion at the first regular session following each decennial census provided it deems that data is then available which is sufficiently definitive to provide the basis for reapportionment in compliance with the "one-person, one-vote" mandate. Otherwise, reapportionment must be accomplished at a special session to be called after the necessary data is available. [Attorney General Opinion No. 18 (March 15, 1971).]

### *Number of Legislators Limited to 75*

Section 6 of Article 15 of the *Nevada Constitution* provides that the aggregate number of members of both branches of the legislature must never exceed 75. Section 5 of Article 4 requires that the number of Senators shall not be less than one-third nor more than one-half of that of the members of the Assembly.

#### **B. POPULATION STANDARDS**

The equal population requirements for state legislative and congressional districts rest on two different constitutional provisions and are subject to two different standards.

The equal population requirement for state legislative districts results from the application of the Equal Protection Clause of Article 14 of the *United States Constitution*. The requirement for congressional districts results from the application of Section 2 of Article 1 of the *United States Constitution* which requires representatives to be apportioned among the several states according to their respective numbers.

##### **1. Standard for State Legislative Districts**

In 1964, the U.S. Supreme Court decided *Reynolds v. Sims*, 377 U.S. 533, in which the Court held that the Equal Protection Clause of the 14th Amendment of the *United States Constitution* provides that seats in both houses of a bicameral state legislature must be apportioned on a population basis. An apportionment plan will withstand a constitutional challenge if the plan only has minor deviations in population between districts.

In 1983, the U.S. Supreme Court decided *Brown v. Thomson*, 103 S.Ct. 2690, in which the Court held that, as a general matter, an apportionment plan with a maximum population deviation under 10 percent falls within the category of "minor deviations." The Court previously had held that minor deviations from mathematical equality among state legislative districts are insufficient to make out a prima facie case of invidious discrimination under the 14th Amendment so as to require justification by the state. A plan with larger disparities in population creates a prima facie case of discrimination and, therefore, must be justified by the state.

The ultimate inquiry is whether deviations of population in the plan may reasonably be said to advance rational state policies and, if so, whether the population disparities

among the districts exceed constitutional limits. Population deviations may be justified by a rational state policy. A state policy respecting boundaries of municipal subdivisions has been found by the Court to justify a plan with more than a 10 percent population deviation among districts. Other rational state policies have included the desire to provide for compactness or contiguity of districts or to protect a particular community of interest.

## 2. Standard for Congressional Districts

The equal protection standard for congressional districts has been strictly construed. In Westberry v. Sanders, 376 U.S. 1 (1964), the U.S. Supreme Court held that the population of congressional districts in the same state must be " \* \* \* as nearly equal as practicable."

A reapportionment plan drawn by the New Jersey Legislature with a total deviation of 0.6984 percent was struck down by the U.S. Supreme Court. The plaintiffs had shown that at least one other plan for congressional reapportionment considered by the legislature had an overall population range of only 0.4514 percent. Once the plaintiffs had shown that the population differences could have been reduced, the state had the burden of proving that each significant variation from the ideal was necessary to achieve some legitimate state objective.

In Karcher v. Daggett, 462 U.S. 725 (1983), the Supreme Court wrote:

Any number of consistently applied legislative policies might justify some variance, including, for instance, making districts compact, respecting municipal boundaries, preserving the cores of prior districts, and avoiding contests between incumbent Representatives \* \* \* The State must, however, show with some specificity that a particular objective required the specific deviations in its plan, rather than simply relying on general assertions...By necessity, whether deviations are justified requires case-by-case attention to these factors.

Therefore, any population deviation among congressional districts, no matter how small, may render a reapportionment plan unconstitutional if a plaintiff can show that an alternative plan was presented, and could have been adopted, which would have resulted in a lower total population deviation and the state fails to demonstrate a legitimate state objective necessitating the deviation.

## C. MINORITY GROUP CONSIDERATIONS

Standards relating to racial and ethnic discrimination in redistricting are established through Federal law and Supreme Court decisions.

### 1. Voting Rights Act

Section 2 of the Voting Rights Act--codified as 42 *United States Code* 1973 (a)--prohibits any state or political subdivision from imposing any voting qualification, standard, practice or procedure that results in the denial or abridgment of any U.S. citizen's right to vote on account of race, color or status as a member of a language minority group. Section 2 applies to all states and prohibits purposeful discriminatory practices or practices which result in discrimination.

Congress amended Section 2 of the Voting Rights Act in 1982 to reduce the burden of proof necessary to establish a Section 2 violation. Previously, a plaintiff had to show that a challenged electoral plan was intentionally designed or maintained for a discriminatory purpose.

The 1982 amendments eliminated the intent requirement. As a result, to prove a Section 2 violation, plaintiffs need only demonstrate that a challenged practice or structure results in discrimination against a minority group.

Section 5 of the Voting Rights Act mandates certain state and local governments to preclear changes in voting standards, practices or procedures with either the U.S. Department of Justice or the U.S. District Court for the District of Columbia. Twenty-two states or parts of states now are covered by Section 5 preclearance requirements--Nevada is not a "preclearance state." Redistricting is an election practice which must be precleared before becoming effective in the covered states.

### 2. Drawing Minority Districts

The Court has upheld the use of a 65 percent (racial or language) minority population in a district to facilitate the election of a representative of the minority group. This number is an appropriate percentage to ensure a simple majority (51 percent) of the district's population and to overcome the three typical considerations in a minority neighborhood--less population of voting age, less voter registration and less voter turnout.

A "minority district" with less than 65 percent minority population may indicate "fracturing" and a "minority district" with 75 percent or more minority population may indicate "packing."

"Packing" is drawing district boundary lines so that the members of a minority are concentrated, or "packed," into as few districts as possible. The minority constitutes a super majority in those districts.

"Fracturing" is drawing district lines so that the minority population is broken up. Rather than permitting the minority to concentrate voting strength in a few districts, enabling the minority to elect representatives in those districts, the members of the minority are spread among as many districts as possible, keeping them a minority of the population in every district.

#### D. MULTI-MEMBER DISTRICTS

The issue of racial and ethnic discrimination often arises in connection with the multi-member form of districting. The Reapportionment Subcommittee had extensive discussions relating to the issue of single- vs. multi-member legislative districts, particularly as they pertain to the state Senate. The Nevada Legislature has had various combinations of multi-member districts in both houses throughout its history.

This section provides an informational summary of this issue to include the current legal status of multi-member districts and their use in Nevada and other states.

##### 1. Legal Status

The U.S. Supreme Court has held that the use of multi-member legislative districts is not unconstitutional per se. However, the Court has invalidated the use of multi-member legislative districts where the use of such districts impedes the ability of minority voters to elect representatives of their choice.

Typically, a minority group will challenge a multi-member legislative district when the minority group is of sufficient population that if it was placed in a single-member legislative district the minority group would constitute either a majority of the population or a significant percentage of the population in that district. As a majority or significant percentage of the population of a single-member legislative district, the minority group would have a considerable impact on the outcome of elections

in the district. However, when placed in a multi-member legislative district and combined with a larger white population, the minority group becomes a much smaller percentage of the population in the district and consequently its impact on the outcome of elections is proportionately diminished.

Under the most recent decisions of the Court, it is clear that a minority group placed in a multi-member legislative district will be successful in challenging that district if it alleges the multi-member district discriminates against that group and the minority group is able to demonstrate three separate conditions. The minority group must show that (1) it is sufficiently large and geographically compact to constitute a majority in a single-member legislative district, (2) it is politically cohesive and (3) the majority of the population of the district votes sufficiently as a bloc so that the majority usually defeats the preferred candidate of the minority.

As noted in the following section, the Court has also expressly extended those cases which are properly justiciable under the equal protection clause of the *United States Constitution* to include political gerrymandering cases. A challenge based on a claim of political gerrymandering typically arises when a political group claims that, because of the use of multi-member legislative districts, its influence on the political process is unconstitutionally diminished. However, to succeed in a political gerrymandering case, the plaintiffs must prove both intentional discrimination against an identifiable political group and an actual discriminatory effect on that group.

## 2. Multi-Member Districts in Nevada

Multi-member legislative districts have been in use in Nevada since statehood and were continued with the advent of population-based redistricting in 1965. In the 1965 reapportionment, the 20-member Senate had 11 single-member districts and two multi-member districts. The multi-member districts included a five-member Clark County district and a four-member Washoe/Storey County district. The 40-member Assembly had two 9-member districts, one 3-member district, six 2-member districts and 7 single-member districts.

Under the 1971 reapportionment, the Senate had 7-member and 2-member districts in Clark County, a 4-member district in Washoe County and 7 single-member districts. The Assembly shifted to all single-member districts in that year and has remained under that configuration until the present.

The multi-member districting scheme of the 1971 Nevada Senate was challenged in the case of Stewart v. O'Callaghan, 343 F.Supp. 1080 (1972). The U.S. District Court upheld the use of multi-member districts in the Senate and ruled that they are not inherently unconstitutional unless it is shown that they " \* \* \* operate to dilute or cancel the voting strength of any segment of political grouping."

In the 1981 reapportionment, the 21-member Nevada Senate created five 2-member districts in Clark County, two 2-member districts in Washoe County and 7 single-member districts.

### 3. Other States

According to a table in *Reapportionment Law: The 1990s* by the NCSL Reapportionment Task Force, the Senate bodies in eight states (Alaska, Idaho, Nevada, North Carolina, North Dakota, Vermont, West Virginia and Wyoming) use multi-member districts. The number of multi-member senate districts in these states ranges from 2 in North Dakota to 17 in West Virginia. The largest number of seats in a district ranges from 2 in several of these states up to 6 in Vermont.

The House bodies in 16 states (Alaska, Arizona, Arkansas, Georgia, Idaho, Indiana, Maryland, New Hampshire, New Jersey, North Carolina, North Dakota, South Dakota, Vermont, Washington, West Virginia and Wyoming) use multi-member districts. The number of multi-member house districts in these states ranges from 10 in Arkansas to 103 in New Hampshire. The largest number of seats in a district ranges from two in several of these states up to 12 in West Virginia.

Most of the respective legislative bodies in these states use a combination of multi-member and single-member districts. The legislative bodies in all other states use only single-member districts.

### E. PARTISAN GERRYMANDERING

In Davis v. Bandemer, 106 S.Ct. 2797 (1986), the U.S. Supreme Court reviewed a reapportionment plan adopted by the Indiana General Assembly which reapportioned the legislative districts of the state to include several multi-member districts. Several Indiana Democrats alleged that the 1981 reapportionment plan unconstitutionally diluted their votes, and they specifically alleged that the plans constituted a political gerrymander intended to disadvantage them.

Prior to this case, the Court had held that even where there is no population deviation among districts, racial gerrymandering provides a justiciable equal protection claim. In the Davis decision, the Court expressly extended those cases which are properly justiciable under the equal protection clause to include political gerrymandering cases.

The Supreme Court agreed with the holding of the lower court that to succeed in a political gerrymandering case, the plaintiffs are required to prove both intentional discrimination against an identifiable political group and an actual discriminatory effect on that group.

The Court noted that earlier decisions clearly foreclosed any claim that the Constitution requires proportional representation or that legislatures in reapportioning must draw district lines to come as near as possible to allocating seats to the contending parties in proportion to what their anticipated statewide vote will be. The electoral power of a group is not unconstitutionally diminished by the simple fact of an apportionment scheme that makes winning elections more difficult, and a failure of proportional representation alone does not constitute impermissible discrimination under the equal protection clause.

Unconstitutional discrimination occurs only when the electoral system is arranged in a manner that will consistently degrade the influence of a voter or group of voters on the political process as a whole. The question is whether a particular group has been unconstitutionally denied its chance to influence effectively the political process.

In a challenge to an individual district, this inquiry focuses on the opportunity of members of the group to participate in party deliberations in the slating and nomination of candidates, their opportunity to register and vote, and hence their chance to influence directly the election returns and to secure the attention of the winning candidate. Statewide, the inquiry centers on the direct or indirect influence of the voters on the election of the state legislature as a whole. A finding of unconstitutionality must be supported by evidence of continued frustration of the will of the majority of voters or effective denial to a minority of voters of a fair chance to influence the political process.

Even if a state legislature redistricts with the specific intention of disadvantaging the election prospects of one political party, the Court does not believe that there has been an unconstitutional discrimination against members of

that party unless the redistricting does, in fact, disadvantage it at the polls. A mere lack of proportionate results in one election cannot suffice in this regard. Equal protection violations may be found only where a history (actual or projected) of disproportionate results appears in conjunction with similar indicators.

#### F. PROPOSED RULES

Following a review of the legal requirements and redistricting rules used in other states, the Reapportionment Subcommittee developed a document entitled "Proposed Rules for Redistricting by the Nevada Legislature." A copy of this document is found in Appendix C.

The proposed rules primarily are based on the current legal requirements for redistricting as established through Supreme Court decisions. Further discussion of the proposed rules is found in section IX.A. of this report.

### V. THE ADJUSTMENT ISSUE

One of the major concerns facing state legislatures for the 1991 round of redistricting relates to the adjustment issue--accounting for the expected undercount of minority groups in the census. A court settlement and the timetable established for a possible adjustment could create significant problems for the completion of a successful reapportionment by the legislatures in Nevada and elsewhere.

#### A. THE UNDERCOUNT PROBLEM

The Census Bureau estimated that it did not count 1.4 percent of the total population in 1980. That undercount varied among different groups and was most significant among minority communities. The Bureau estimated that it failed to count 5.9 percent of the black population in 1980.

Since many of the missed population live in inner-city areas, the undercount is a particular concern to major cities and the groups that generally represent these citizens. Representatives of these groups have urged the Census Bureau to use a statistical method to adjust the census figures for the undercount. However, the U.S. Department of Commerce (DOC) in 1987 announced that the Census Bureau would not make an adjustment, and legislation in Congress to require an adjustment did not progress.

## B. LAWSUIT AND SETTLEMENT

In response, New York City, other state and local governments and civil rights groups filed a lawsuit in the case of City of New York et al., v. Department of Commerce et al., Docket No. 88 Civ. 3474 (U.S. District Court, Eastern District of New York). On July 17, 1989, a settlement of this lawsuit was announced that requires the Commerce Department to prepare for a possible adjustment.

Among other things, the settlement requires guidelines to be published on the statistical and policy grounds for the decision on whether to adjust the 1990 census counts, and that a decision on the adjustment be made and corrected data provided not later than July 15, 1991.

This deadline poses a problem for Nevada and other states since Federal law requires the Census Bureau to provide population figures to the states for redistricting by April 1, 1991. The Nevada Legislature traditionally has adjourned, and would complete redistricting, well in advance of the July 15 deadline.

The effect of a decision to adjust the census is unclear. Completed redistricting plans in Nevada could be challenged on the basis of the adjusted population figures. Since congressional districts have a more precise legal standard for population equality, those plans almost certainly would require modification. The need for modifying state legislative districts likely would depend on the level of disparity between district populations and the impact of the adjustment on those ratios of disparity.

The Court stipulation on the settlement agreement also required the DOC to establish an independent Special Advisory Panel to assist in the decisionmaking process. The Panel is to advise the DOC on all aspects of the adjustment issue and each member is required to submit his or her recommendations to the Secretary of the DOC.

The panel consists of eight persons appointed by the U.S. Secretary of Commerce with two of the members appointed as co-chairs. The stipulation states:

The Panel shall be comprised of eight persons, none of whom shall be employed by any of the parties hereto, of such knowledge, judgment and probity that their judgment and advice shall be entitled to the utmost respect by defendants.

The Commerce Department appointed four members and the other four members were appointed by the Secretary from a list of seven candidates submitted by the plaintiffs. The plaintiffs also nominated one of the co-chairs for designation by the Secretary. The members of the panel are professors and heads of companies with strong statistical backgrounds.

The Commerce Department requested comments and published its proposed guidelines for the adjustment in the December 11, 1989, issue of the *Federal Register*. The comment period extended to February 2, 1990, for public input on the 12 proposed guidelines. The settlement required the final guidelines to be published in the *Federal Register* by March 10, 1990.

### C. SUBCOMMITTEE COMMENTS ON GUIDELINES

Nevada's Subcommittee on Reapportionment reviewed the proposed guidelines at its meeting on January 25, 1990, and voted unanimously to submit comments on them. In its three-page letter dated January 29, 1990, the Subcommittee stated that it:

\* \* \* strongly supports the proposed guidelines and urges the United States Bureau of the Census in the U.S. Department of Commerce (DOC) to conduct the most complete and accurate count of the population possible for the 1990 census to preclude any need for an adjustment.

The subcommittee's letter particularly focuses on four guidelines that would require an adjustment to be more accurate down to the block level for redistricting and easily understood by the public to justify the disruption that would be caused. The letter concludes as follows:

Nevada's Subcommittee on Reapportionment strongly supports the proposed guidelines as written. The decennial census has served as a standard throughout our Nation's history. If the census is to be statistically adjusted for the first time ever, it must be thoroughly justified and irrefutably proven to be more accurate and useful. We believe that the proposed guidelines establish criteria that would allow an adjustment only under such extraordinary circumstances. The Subcommittee urges the U.S. Department of Commerce to adopt the adjustment guidelines as proposed.

A complete copy of the subcommittee's letter to comment on the proposed adjustment guidelines is found in Appendix D.

#### D. FINAL GUIDELINES

The final guidelines on the adjustment of the 1990 census were released by the U.S. Department of Commerce on March 12, 1990. The DOC made substantial revisions to the proposed guidelines based on the comments received, and the total number of guidelines was reduced from 12 to 8. The points strongly supported by the Reapportionment Subcommittee in the proposed guidelines appear to have been retained as considerations in the final guidelines.

According to the DOC, the final guidelines present more thoroughly the technical considerations to be taken into account in the decisionmaking process. The DOC later issued a more detailed outline of technical operations and procedures for persons who desired an even greater level of technical specification. The DOC also pointed out that every consideration in each guideline need not be completely satisfied or resolved to reach a decision on adjustment.

A copy of the final guidelines is found in Appendix E of this report.

Critics of the guidelines contended that the Commerce Department established criteria that cannot be met and that will rule out any statistical change.

#### E. COURT DECISION ON GUIDELINES

As expected, the plaintiffs filed suit on April 11, 1990, to challenge the final adjustment guidelines adopted by the DOC on March 12, 1990. Oral arguments were heard on May 24, 1990, and U.S. District Court Judge Joseph M. McLaughlin of the Eastern District of New York issued his decision on the adjustment guidelines on June 7, 1990. The following is a summary of that decision.

##### *Declaratory Judgment*

The plaintiffs sought a declaratory judgment declaring that a statistical adjustment of the Federal census does not violate the Constitution or Federal law.

The Court found that "It is no longer novel or, in any sense, new law to declare that statistical adjustment of the decennial census is both legal and constitutional." Various court cases were cited. The Court concluded that the Constitution is not a bar to statistical adjustment because it requires the census to be as accurate as practicable. "The concept of statistical adjustment is wholly valid, and may very well be long overdue. Whether it has been done

legally and constitutionally can only be determined after the Secretary has decided how he wishes to adjust, if at all."

### *Breach of Stipulation*

The plaintiffs sought a Supplemental Order from the Court: (1) invalidating the guidelines; (2) ordering defendants to adjust the census unless they demonstrate to the Court that the original enumeration is more accurate or that some other compelling reason prevents a statistical adjustment; and (3) directing the defendants to fulfill their obligations to the Special Advisory Panel. The motion for a Supplemental Order was granted in part (3) and denied in parts (1) and (2).

The plaintiffs argued that the guidelines violate the stipulation because (1) they contained a built-in bias; (2) they did not set forth technical standards for the decision; and (3) they permit the Secretary to base his decision on impermissible factors.

On the question about whether the guidelines are biased, the Court does not view the guidelines as biased against adjustment. "The ultimate decision on whether to adjust, of course, must be fresh and unbiased, following the Secretary's de novo review of the record. That good faith discretion, I am convinced, is preserved under the guidelines."

On the objection that the guidelines fail to articulate sufficiently technical standards, the Court judged that the defendants have complied with the terms of the stipulation in that they have adopted guidelines to articulate grounds for decision. The Court refused to get into a semantic discussion between "guidelines" and "standards".

The Court was most troubled with the third objection that the guidelines allow the Secretary to rely on impermissible factors in making the adjustment decision. "It is more accurate to say, however, that the guidelines list valid factors for decision-making but that they are subject--like any set of rules--to being impermissibly contorted to justify a flawed final decision."

The Court cited the stipulation's requirement for a full explanation of a decision not to adjust as protection against anticipated abuse. "Because defendants have chosen to contribute adequate but minimal performance to satisfy their obligations at this stage, defendants clearly incur a heavier burden to explain why no adjustment was made in the

event the Secretary elects to proceed with an actual enumeration."

The judge admitted that guidelines 5 through 8 lend themselves easily to abuse. The decision cautions that:

Intentional inaction will not be tolerated. Defendants are expected, indeed required, to honor their solemn commitments embodied in the stipulation. \* \* \* Defendants, however, are on notice, if it is not already clear, that backdoor attempts to evade their commitment will not be countenanced.

#### *Special Advisory Panel*

Finally, the Court agreed with the plaintiffs that the defendants had breached obligations to the Special Advisory Panel in that they had impermissibly "juggled" the accounting books, depleting the \$500,000 panel fund with improper and inflated charges. The stipulation requires the defendants to provide specific services in addition to the duty of establishing the \$500,000 fund.

#### F. TESTIMONY BEFORE SPECIAL ADVISORY PANEL

The meeting of the Reapportionment Task Force of the NCSL on June 28, 1990, in Baltimore, Maryland, provided a unique opportunity for state legislators to testify before the Special Advisory Panel on the census adjustment issue. The advisory panel particularly was interested in the effects of an adjustment decision on state legislatures and the redistricting task.

Nevada's Subcommittee on Reapportionment reviewed and approved testimony by the Chairman, Assemblywoman Jan Evans, who highlighted the time constraints and possible effects of an adjustment decision on the Nevada Legislature. The following summarizes some of the key points made by the Assemblywoman Evans in testimony before the Special Advisory Panel.

A primary concern of the Nevada Legislature with the adjustment issue relates to the July 15, 1991, deadline and the probability that adjusted counts would require the Legislature to meet in special session to modify its redistricting plans at significant expense to the state's government and its citizens.

The Nevada Legislature is concerned that the redistricting task not unnecessarily extend the length of the 1991 session or cause the need for a special session.

If the census redistricting data is received on or before April 1, 1991, as required, the Legislature will have a little more than 2 months to accomplish its task in time for reasonable adjournment in June 1991. The Nevada Legislature is investing almost \$450,000 and considerable staff time in new computer equipment and a geographic information system and database to ensure that its redistricting task can be accomplished in a timely and efficient manner under the new TIGER system environment.

If a decision is made to adjust the 1990 census and the adjusted data is not provided to the states until July 15, 1991, the Nevada Legislature most likely will be adjourned with its redistricting plans already completed. The Legislature's expense and efforts in preparation for redistricting could be largely negated, and the state's taxpayers could be required to assume the additional burden of the cost of a special session if modification of the redistricting plans becomes necessary in conjunction with the adjusted data.

The Nevada Legislature's Subcommittee on Reapportionment contends that these expenses, and the further controversy that would result from an adjustment, must be clearly and easily justifiable to avoid a loss of faith by the public in the process of allocating political representation. If the census is to be adjusted for the first time in the Nation's history, it must be thoroughly justified and irrefutably proven to be more accurate and useful--particularly down to the census block level which will be used for redistricting in Nevada and many other states.

Nevada's Reapportionment Subcommittee strongly urges the Special Advisory Panel to take into account this criteria, the historical precedent and the financial and political impacts on state legislatures in Nevada and throughout the country as the panel deliberates on its advice to the Secretary of the Department of Commerce on whether to adjust the results of the 1990 census.

A complete copy of the Chairman's testimony before the Special Advisory Panel is provided in Appendix F.

Most experts generally agree that, unless congressional action is taken, the adjustment issue will be tied up in the courts for a significant period of time no matter what decision is made. Further discussion and a recommendation concerning the adjustment issue is found in Section IX.C. of this report.

## VI. CENSUS MAPPING

An understanding of the census geography is essential to the interpretation and use of the 1990 census data for redistricting. This section reports on the completion of the state's participation in the Census Bureau's Block Boundary Suggestion Program and provides an overview of the census geography.

### A. COMPLETION OF PHASE 2 MAPPING

The Nevada Legislature has been working with the Census Bureau since 1985 through involvement in the BBSP. Previous reports on Nevada's participation in this program are found in LCB Bulletin Nos. 87-15 and 89-1.

Federal law (Public Law 94-171) requires the Census Bureau to provide states with population counts from the national decennial census for legislative redistricting purposes. Under this law, the Census Bureau established the BBSP to allow states to suggest certain visible geographic features to be held as block boundaries for the 1990 census.

The Census Bureau furnishes population counts by standard geographic areas to include the boundaries of counties, census county divisions, incorporated cities, Indian reservations, census tracts, block groups and census blocks. For states participating in the BBSP, the Census Bureau also will provide 1990 census counts for election precincts or voting districts by aggregating data for census blocks within those precincts.

Other than boundaries for counties, cities and Indian reservations, the Census Bureau uses visible features, rather than invisible survey boundaries such as range and township lines, for block boundaries to improve the accuracy of the census. Phase 1 of the BBSP involved extensive mapping work with the Seattle [Washington] Regional Office of the Census Bureau to identify visible geographic features to coincide with precinct boundaries in the counties throughout the state.

Work on the Phase 2 mapping process began by LCB staff at the end of November 1989. The process involved the identification, marking and coding by county of the state's 1,212 voting precincts on a total of 848 census map sheets that cover Nevada. Staff met with every county clerk and registrar of voters to identify block boundaries that coincide with or approximate precinct boundaries. The Phase 2 process was completed on May 3, 1990, when the maps for the last county in the state were mailed to the Seattle

Regional Office of the Census Bureau. Staff of the Seattle Office noted that Nevada had the lowest error rate among the states in the Western Region for the submission of precinct boundaries.

Completion of this program ensures that Nevada will receive data from the 1990 census by precincts as well as the standard census geography. Since the provision of precinct data is based on the aggregation of census block data, the boundaries of election precincts--whether actual or adjusted--were required to follow the census geography which is based on visible features and political boundaries such as county and incorporated city limits.

For a number of reasons, all precinct boundaries in the state do not follow precisely the 1990 census geography. However, almost two-thirds of the state's precincts are classified as "true" in that they exactly match the census geography. A precinct is not classified as "true" if an adjustment had to be made to conform the actual boundary to the census geography. For "adjusted" precincts, the criteria used to establish the adjusted boundaries included: (1) the need to follow the closest and most reasonably available census block boundary and (2) the consideration to minimize the effects on the voters of the affected precincts.

A complete report on the Phase 2 mapping process for Nevada, to include statistical and deadline data, and copies of the census maps with the annotated precinct boundaries are available for review in the Research Division of LCB.

## **B. OVERVIEW OF CENSUS GEOGRAPHY**

The hierarchy of census geography begins at the lowest level with the census block. Blocks are the smallest census geographic areas, normally bounded by streets or other prominent physical features. They may be as small as a typical city block bounded by four streets in an urban area, or as large as several square miles bounded by highways, other roads, streams or ridgelines in rural areas.

Census Bureau estimates for 1990 in Nevada indicate a little more than 30,000 blocks statewide--compared to almost 9,000 blocks in 1980 only in the urban areas. The total number of blocks in Nevada in 1990 will be more than three times the number in 1980.

The next level in the census geographic hierarchy is a block group which is an aggregation of blocks. Block groups then are aggregated into census tracts and block numbering areas

(BNA's). Census tracts are statistical areas averaging about 4,000 people which are used in counties with metropolitan statistical areas, such as Las Vegas and Reno. These areas usually remain constant from census to census and thus are useful for a variety of historical applications. In rural areas, BNA's are used as aggregations of block groups where there are no census tracts.

In Nevada, census tracts are used in four urban counties in the state (Carson City, Clark, Douglas and Washoe) with a total of 183 census tracts. Block numbering areas are used in the remaining rural counties with a total of 59 BNA's.

Voting districts are the smallest areas proposed by state governments to encompass election districts or precincts. Voting district boundaries may coincide with the boundaries of other areas such as census tracts, BNA's or incorporated places. Nevada has designated more than 1,000 voting districts throughout the state.

The final major, subcounty level of census geography is the census county division (CCD) which, in Nevada, replaces the townships used in earlier censuses. This change was approved by the Governor, with legislative concurrence, in 1987 to provide a consistent subcounty level of geography from census to census. Nevada's counties are divided into a total of 68 CCD's.

Population data also will be aggregated and available from the 1990 census for each of Nevada's 18 incorporated cities, the 17 counties, Census Designated Places (CDP's) and the state. The CDP's are closely settled population centers in unincorporated areas which must have a minimum population of 1,000 persons. In 1980, Nevada had 18 CDP's. The state has the potential for 51 in the 1990 census. The actual number of CDP's for 1990 will not be determined until the final census results are compiled.

Nevada's CDP's in 1980 were Battle Mountain, East Las Vegas, Fallon Naval Air Station, Gardnerville-Minden, Gardnerville Ranchos, Hawthorne, Incline Village-Crystal Bay, Kingsbury, McGill, Nellis Air Force Base, New Washoe City, Overton, Paradise, Sunrise Manor, Sun Valley, Tonopah, Winchester and Zephyr Cove-Round Hill Village. Again, it is possible that the number of CDP's in the state could more than double for 1990.

All of these levels of census geography--from the block to the county level--will be available for the development of redistricting plans during the 1991 session.

### C. TIGER FILES

The TIGER files are a major innovation for the 1990 census, developed by the Census Bureau in cooperation with the U.S. Geological Survey. The TIGER files for Nevada are basically a computer readable map of the state. It contains geographic coordinates for the Earth's surface features such as roads and streams. It includes political boundaries (such as for cities and counties) and geographic area codes for statistical areas (such as blocks and census tracts) for which the Census Bureau collects and tabulates data.

The TIGER files provide a geographic database for the state, but they do not contain any 1990 census data. They do contain the geographic codes that are necessary to match with the 1990 census data in the Public Law 94-171 data file to be received early in 1991 for redistricting. This matching process places the 1990 census data in a form the computer understands and requires to draw maps that show relationships among the geographic areas. The computer program that displays a map and manipulates the associated data is known as a geographic information system. Further information on the Nevada Legislature's GIS is provided in Section VIII of this report.

## VII. CENSUS AND REDISTRICTING DATA

A successful reapportionment effort depends, in large part, on a complete and accurate census and the timely provision to the states of the Public Law 94-171 redistricting data. This section reports on Nevada's participation in the Post-census Local Review Program, reviews the state's preliminary census counts, highlights Nevada's priority for receiving the redistricting data, and provides a discussion of statistical terminology used in redistricting.

### A. CENSUS LOCAL REVIEW PROGRAM

One method used by the Census Bureau to improve the accuracy of the census was the local review program which provided an opportunity for local government officials to review preliminary 1990 census counts and to identify apparent discrepancies. It was designed to pinpoint problems such as clusters of missed housing units, housing units listed in the wrong location or incorrectly displayed political boundaries.

The Precensus Local Review Program--primarily limited to urbanized areas--allowed local governments to review counts of housing units at the block level so they could identify

any discrepancies. As a result, challenges on certain blocks were filed by Carson City, Henderson, Las Vegas, North Las Vegas, Reno, Sparks and Washoe County. The Census Bureau reviewed or recanvassed the challenged blocks and reconciled the differences.

The Postcensus Local Review Program took place in late August and September 1990 when all local governments in the state received census housing unit counts by block and preliminary total population counts by counties, incorporated cities and Indian reservations. The local governments had only 15 working days to review and challenge the housing unit counts.

At the end of July 1990, both the Governor and the Reapportionment Subcommittee sent letters to the highest elected officials and program liaisons in all local governments in Nevada to encourage participation in the Postcensus Local Review Program. Copies of these letters are shown in Appendix G.

The postcensus local review was extremely important because it provided the state with a first look at the preliminary 1990 census counts and because it was the only opportunity for local officials to review and challenge the housing counts if there were significant discrepancies.

Regional Census Bureau officials advised that Nevada had the highest response rate--over 50 percent--in the Western Region for local governments in the Postcensus Local Review Program. Nationwide, 17 percent of local governments participated in the program.

In Nevada, four counties (Clark, Nye, Washoe and White Pine); 13 cities (Boulder City, Caliente, Carlin, Elko, Ely, Henderson, Las Vegas, Lovelock, North Las Vegas, Reno, Sparks, Winnemucca and Yerington); and three Indian colonies and reservations (Ely Indian Colony, Las Vegas Indian Colony and Duck Valley Indian Reservation) submitted acceptable challenges to the housing unit counts in the local review program. In addition, two counties--Douglas and Eureka--submitted letters accepting the preliminary counts.

On December 26, 1990, the U.S. Census Bureau announced the final statewide results of the 1990 census which placed Nevada's population at 1,206,152--an increase of 12,867 over the preliminary counts released in August 1990. The increase resulted from the Census Bureau's coverage improvement programs and the challenges submitted by local governments in the Postcensus Local Review Program. The total includes enumerations for the resident population, along

with counts of military and Federal civilian employees and their dependents overseas as reported by various Federal agencies.

## B. PRELIMINARY CENSUS COUNTS

On August 24, 1990, the 1990 Census Redistricting Data Office of the U.S. Bureau of the Census released printed copies of the postcensus local review counts for governmental units in the State of Nevada. This document included preliminary population counts for the state, counties, incorporated cities and Indian colonies and reservations. It also included a list of conditions which emphasized the partial and preliminary nature of these population counts.

A staff analysis of the preliminary census counts was presented to the Reapportionment Subcommittee at its September 1990 meeting. A copy of this analysis is reproduced in Appendix H, and summarized in the following discussion.

As expected, the 1990 preliminary census counts were substantially below the state's preliminary 1990 population forecasts. However, the distribution of the population and growth rates of the major areas of the state were relatively consistent with previous projections.

The preliminary census data verified previous projections that, under the current configuration of the 63-member Legislature, the Washoe/Carson area would lose control of two Assembly districts and one Senate district to be gained by the Clark County area, while the rural area of the state would essentially retain its present number of seats.

The subcommittee was presented a table which showed the allocation of seats for various configurations from the current 63-member legislature up to the maximum constitutional limit of 75 members based on the preliminary census counts. This data indicated that the size of the legislature would need to increase to 72 or 75 members for the Washoe/Carson area to retain its current level of representatives, and that the Clark County area would gain control of an additional 9 or 10 seats, respectively, under these configurations.

Based on the preliminary census counts, the ideal population for an Assembly district in a 63-member Legislature would be

28,412; with the ideal Senate seat at 56,823. At the maximum 75-member Legislature (with 50 Assemblymen and 25 Senators), the ideal Assembly district population would be 23,866; with the Senate at 47,731. For comparison purposes, the ideal Assembly district in 1981 was 19,028 and the ideal Senate population was 38,056.

Based on the final statewide total (1,206,152) announced at the end of December 1990, the ideal population for an Assembly district in a 63-member legislature would be 28,718; with the ideal Senate district at 57,436.

The preliminary census data also verified previous projections that the number and percentage of Clark County population in the northern Congressional District No. 2 would increase significantly under the current configuration of the congressional districts.

It must be emphasized that the census counts used in this analysis are partial and preliminary. This data is useful only to indicate the possible ramifications of the final census results and the potential effects on reapportionment in the state, but it could not be used for actual redistricting.

#### C. NEVADA'S PRIORITY FOR REDISTRICTING DATA

In a memorandum dated August 3, 1990, the Census Bureau's 1990 Census Redistricting Data Office announced its planned processing sequence for the delivery of Public Law 94-171 redistricting data to the states. Nevada is in Tier 2 (out of four tiers) of states which means that, barring any unforeseen processing problems, Nevada should be among the first 20 states to receive the data necessary to accomplish redistricting during the first quarter of 1991.

Since 1970, the Census Bureau has given consideration to states that face tight time deadlines for accomplishing congressional and legislative redistricting and require small-area decennial census counts. For the 1990 Redistricting Data Program, the Census Bureau surveyed the states to confirm deadlines and subsequently categorized states into four tiers for delivery of the data during the cycle from late January to late March 1991.

The assignment of states reflects factors such as dates of 1991 legislative sessions, coverage under Section 5 of the Voting Rights Act, 1991 primary and general election dates and similar considerations. Nevada received priority placing in Tier 2 because of its state constitutional

requirement to redistrict during the first regular session after the decennial census.

The Census Bureau cautions that it cannot predict what, if any, processing or other unforeseen problems might make it impossible to complete and deliver the P.L. 94-171 data for a given state at a given time prior to the legal deadline of April 1, 1991. However, Nevada's placement in Tier 2 offers encouragement that the state will receive its redistricting data early in the process to allow sufficient time for the consideration of redistricting alternatives during the 1991 regular session.

At a NCSL Reapportionment Task Force meeting in November 1990, the Census Bureau announced that the P.L. 94-171 redistricting data tapes will begin to be sent to states in the first priority tier during the last week of January and the first week of February 1991. Census county block maps are expected to start to flow to the states by late December 1990.

Considering these timeframes, it is projected that the Public Law data may be received in Nevada anywhere from the middle to the end of February 1991. Once the redistricting data is received, it is anticipated to take at least 2 weeks for LCB staff and the contractor to validate the data to ensure that all census numbers match the appropriate census geography. Therefore, barring unforeseen circumstances, a preliminary projection indicates that it may be possible to begin drawing redistricting plans in the Legislature by the middle of March 1991.

#### D. STATISTICAL TERMINOLOGY

During the redistricting process, certain statistical terms will be used frequently as measures of population equality among districts. This section and Appendix I--derived primarily from pages 18 through 21 of the NCSL publication entitled *Reapportionment Law: The 1990s*--are provided as reference definitions and explanations of these terms.

The logical starting point is the "ideal" district population which, in a single-member plan, is equal to the total state population divided by the total number of districts. For example, using the preliminary state population of 1,193,285, the ideal district population for a 42-member Assembly would be 28,412, with the ideal Senate seat at 56,823. In multi-member districting plans, the "ideal" population is more properly expressed as the ideal population per representative.

Two terms--absolute deviation and relative deviation--measure the degree by which a single district's population varies from the ideal. The absolute deviation equals the difference between the district population and the ideal population, expressed as a plus or minus number. Relative deviation is the more commonly used measure which is derived by dividing the district's absolute deviation by the ideal population. This calculation provides a percentage figure by which the district population exceeds, or falls short of, the ideal population.

For example, the preliminary census count for Douglas County is 27,581. If that county would constitute one Assembly district, it would have an absolute deviation of minus 831 (27,581 minus the ideal population of 28,412); and a relative deviation of minus 2.9 percent (831 divided by the ideal population of 28,412).

The other statistical terms (see Appendix I) measure the extent to which the populations of all districts vary collectively from the ideal. The most commonly used measure of population equality or inequality of all districts in a plan is the range which also may be expressed in absolute (actual number) or relative (percentage) terms. The range is a statement of the population deviations of the most populous district and the least populous district.

The overall range is the sum of the deviation of the most and least populous districts, disregarding the plus and minus signs, expressed in absolute or relative terms. For illustration purposes, assume that the Douglas County example is the least populous district in a plan. Using the preliminary census counts, then assume that the most populous district in that plan is created out of a portion of Elko County (preliminary population of 33,063) with a district population of 29,000. The absolute deviation for the Elko district then would be plus 588 (29,000 minus 28,412), and the relative deviation would be plus 2.1 percent (588 divided by 28,412). The absolute overall range of this plan would be 1,419 (831 plus 588); and the relative overall range would be 5.0 percent (2.9 plus 2.1 percents).

The remaining terms--absolute and relative mean deviations and standard deviation--primarily are useful measures in evaluating a set of districts when the range may be large due to the large deviation of one district when the other districts may be clustered closely around the ideal.

During the redistricting process in the 1991 session, the most consistently used statistical terms will be the ideal district population, the absolute and relative deviations

for individual districts, and the relative overall range of all districts in a plan.

#### VIII. NEVADA LEGISLATURE'S GEOGRAPHIC INFORMATION SYSTEM

The Nevada Legislature has significantly enhanced its computer capabilities with the purchase and development of a GIS. While the primary focus of the GIS currently is based on preparation for the redistricting task of the 1991 session, the Legislature's system consists of a generic, broad-based GIS that has a wide range of applications beyond reapportionment. This section provides a brief overview of the Nevada Legislature's GIS capabilities and equipment, along with an explanation of database development for redistricting.

##### A. DEFINITION OF GIS AND SOFTWARE

A textbook definition provides that a GIS is an organized collection of computer hardware, software, geographic data and personnel designed to efficiently capture, store, update, manipulate, analyze and display all forms of geographically referenced information. In other words, a GIS is a computer system capable of holding and using data describing places on the Earth's surface--it is only a GIS if it permits spatial operations on data.

The Nevada Legislature selected ARC/INFO from the Environmental Systems Research Institute (ESRI) for its GIS software and redistricting application. The ARC/INFO system provides a widely used, broad-based GIS software product of which redistricting is one of many possible applications.

##### B. EQUIPMENT CONFIGURATION

The ARC/INFO software has been operating on a central support staff workstation which is a Digital Equipment Corporation VaxStation 3100 with 16 megabytes of internal memory and 766 megabytes of disk storage. It is connected to the Legislature's mainframe computer which has 1.2 gigabytes of disk storage reserved as a central file for the census data, the TIGER files and the elections and voter registration databases.

Four additional, similarly configured workstations were obtained in late November 1990 for the use of legislators or their designees. Data processing staff of LCB waited as long as possible to order these workstations to take advantage of lower costs and higher capabilities, and

significant savings were realized. These workstations have 24 megabytes of internal memory.

The four independently operating workstations are to be allocated to each political party in each house. During the session, these workstations will be located in the Legislative Building, and the central support staff workstation will be in the legislative Staff Office Building.

The workstations are connected to the mainframe computer on a thinwire Ethernet that transmits 10 megabits per second. Data processing staff created a mixed interconnect cluster with each workstation becoming a remote cluster member. This configuration enables each workstation to access the converted TIGER file data to create redistricting plans, while also providing the capability to securely hold plan files separately on each workstation.

Each workstation also has a JDL 850 Penless Plotter/Printer for output that utilizes a ribbon cartridge for producing working maps and statistical tables at each site. In addition, a Calcomp Pen Plotter will be accessible through each workstation to produce larger, higher resolution maps. The final major piece of computer hardware for the GIS is a Calcomp Digitizer to allow central support staff to update and revise features in the geographic database.

### C. REDISTRICTING APPLICATION

A GIS typically links different data sets, such as population figures, with geographic features, like political precinct boundaries. The Nevada Legislature's GIS for redistricting links census population figures to geographically defined census areas down to the block level. The geographic database is derived from the Census Bureau's TIGER line files. The census population figures are divided into several categories, such as race and voting age population, that are linked to the census block areas.

Legislative staff also developed an elections and voter registration database for 1986, 1988 and 1990 that is linked to precinct boundaries throughout the state. This data is proportionally allocated to the block level within each precinct to allow for comparisons, as necessary, between proposed districts.

These linked databases will allow legislators and staff to call up various geographic areas of the state on a computer screen, add or subtract certain areas, and review the statistical results of this action on the population figures of those geographic areas. In this manner, a wide range of

redistricting alternatives can be analyzed and evaluated in a relatively rapid, accurate and efficient process.

#### D. DATABASE DEVELOPMENT

The most time-consuming tasks during the 1989-1990 interim period related to development of the databases for redistricting. The Nevada Legislature contracted with ESRI for services to assist in the database development process.

During the spring and summer of 1990, technical staff from ESRI converted the precensus TIGER files to ARC/INFO software format. Based on information provided by LCB staff, ESRI also added precinct boundaries for all counties in the state and the boundaries for current legislative, congressional and State Board of Education/Board of Regents districts to the converted TIGER file geographic database.

Due to the current need for election and registration data to compare the effects of redistricting plans, LCB staff has developed an elections and voter registration database for redistricting that includes data from the 1986, 1988 and 1990 General Elections in Nevada.

At its meeting in January 1990, the Reapportionment Subcommittee directed staff to use the U.S. Senate races in 1986 and 1988 in the state for the elections database since the results indicated that they were the most competitive and probably most indicative of party voting trends. Following a review of the November 1990 General Election results, the subcommittee directed staff to use the Secretary of State contest for the 1990 elections database.

In the future, legislative staff should have the capability to analyze most election results throughout the state. However, for the 1991 redistricting effort, the elections database must be limited to certain representative, competitive elections due to the workload involved in entering such data and the potential inaccuracies of precinct information from previous election years.

Due to issues of geographic and data comparability, the 1986, 1988 and 1990 elections and voter registration databases for Nevada redistricting are not strictly comparable. Staff of LCB made every effort to provide consistency to the election data and precinct boundaries, but it must be recognized that data comparability between these election years is not precise. The databases in the redistricting application will include disclaimers to ensure that users understand that they are not strictly comparable and that they are useful only for general analysis of voting

and registration trends in the state. A more complete report on database development and the issues of geographic and data comparability is available from the Research Division of LCB.

#### E. FUTURE APPLICATIONS

Further data from the 1990 census such as income, housing and other detailed characteristics of the population will be released by the Census Bureau through 1993. Following redistricting in 1991, users of the Nevada Legislature's GIS will have the capability to analyze this additional census data and to build upon the elections and voter registration databases with each subsequent election. The Legislature also will be exploring opportunities to share GIS data with Clark and Washoe Counties which are using the same GIS software (ARC/INFO) in local government applications.

In addition, the Census Bureau is exploring possible procedures for states to participate in the revision and update of the TIGER files over the next decade. Future applications of the Nevada Legislature's GIS are limited only by the imagination and the availability of staff resources.

### IX. FINDINGS AND RECOMMENDATIONS

The Reapportionment Subcommittee reviewed several possible courses of action on reapportionment issues and adopted six recommendations--four of which relate directly to redistricting and two that apply to GIS. All of the Subcommittee's recommendations are advisory in nature to the Legislature or its standing committees, and they do not specifically require the adoption of legislation.

#### A. REDISTRICTING RULES

The subcommittee spent considerable time reviewing the legal requirements for redistricting and rules used in other states to govern the process. The major legal principles of redistricting essentially have evolved since the 1960's in a wide variety of U.S. Supreme Court decisions. The Legislature must comply with these requirements in the development of its redistricting plans to avoid a legal challenge to invalidate a plan on the basis of any of the recognized criteria, such as population equality and minority representation.

The subcommittee sought to consolidate the legal requirements from the numerous court decisions into a single

document which could serve as a ready reference for the evaluation of proposed redistricting plans. The resulting document is entitled "Proposed Rules for Redistricting by the Nevada Legislature"--a copy of which is in Appendix C.

The proposed rules primarily reflect the legal requirements for redistricting, precedents established in Nevada's redistricting and basic considerations for public participation in the process. The purpose of these rules would be to clarify and specify criteria for the consideration of redistricting plans during the 1991 session.

Some critics contend that legislatures should not adopt redistricting rules because they may be too restrictive and used against the legislature in a court challenge of its plans. The subcommittee would argue that its proposed rules simply follow existing legal requirements which must be applied even if no rules are adopted.

The subcommittee further contends that its proposed rules would be advantageous, from a staff perspective, for providing recommendations to the legislative committees and members on plans submitted for consideration. In evaluating plans, it would be easier to cite violations of specific rules rather than a variety of court decisions. In addition, the rules could be helpful in a court case, if the Legislature is challenged, to show that it operated under a consistent set of rules and criteria in evaluating all plans it considered.

If redistricting rules are to be adopted, the action should be taken early in the legislative session to ensure that adequate notice of criteria and procedures is provided for persons or groups that may develop plans for consideration by the Legislature's redistricting committees.

Therefore, the subcommittee recommends:

**That, early in the 1991 session, the Senate Committee on Government Affairs and the Assembly Committee on Legislative Functions and Elections adopt redistricting rules in accordance with the document entitled "Proposed Rules for Redistricting by the Nevada Legislature."**

#### **B. LEGISLATIVE STRUCTURE - NUMBER OF MEMBERS**

One of the major initial decisions by the Nevada Legislature relating to redistricting pertains to the number of members. Section 6 of Article 15 of the *Nevada Constitution* limits the aggregate number of members of both branches of the legislature to no more than 75. Section 5 of Article 4

requires that the number of Senators shall not be less than one-third nor more than one-half of that of the members of the Assembly.

The subcommittee determined that a decision on the aggregate number of members of the Nevada Legislature for 1991 redistricting should be made as early as practicable in the session. If such a decision is not made early, the redistricting process could become excessively complicated with unlimited requests for a wide variety of plans under numerous possible configurations. The Legislature's staff resources and computer capabilities could be unduly stretched to the maximum under such a wide variety of options. In addition, a delay in making this decision could have the consequence of unnecessarily extending the length of the 1991 session.

Therefore, the subcommittee recommends:

That, as soon as practicable in the 1991 session, the Senate Committee on Government Affairs and the Assembly Committee on Legislative Functions and Elections agree and make a decision on the aggregate number of members of the Nevada Legislature for redistricting.

The current composition of the Nevada Legislature stands at an aggregate number of 63 members. The subcommittee reviewed a staff analysis of the preliminary 1990 census counts which included the effects by region of these numbers on possible configurations of the Legislature from the current number up to the maximum of 75 members (see Appendix H).

This analysis revealed that, under the current 63-member configuration, the Washoe/Carson City area would lose control of two Assembly districts and one Senate district to be gained by the Clark County area, while the rural area of the state would essentially retain its present number of seats. This data further indicated that the size of the Legislature would need to increase to 72 or 75 members for the Washoe/Carson City area to retain its current level of representation, and that the Clark County area would gain control of an additional 9 or 10 seats, respectively, under these configurations.

While Nevada's final 1990 census results are greater than the preliminary counts used in this analysis, it is unlikely that the proportional distribution of the population among the state's major populated areas will change significantly to affect the results of this preliminary analysis.

With these considerations, the subcommittee unanimously agreed that the Legislature should retain its current composition of 63 members for redistricting. This decision was based on several factors discussed by subcommittee members to include (1) avoidance of the additional costs that would be incurred by increasing the membership of the Legislature, (2) the need to allow room for growth of the Legislature in the future if necessary as the state continues its rapid rate of population increase, and (3) a desire to minimize disruption to the current structure and basis of legislative representation in the state.

Therefore, the subcommittee recommends:

**That the Nevada Legislature remain under its current 63-member configuration for redistricting in 1991.**

**C. THE ADJUSTMENT ISSUE - REDISTRICTING TIMETABLE**

The Reapportionment Subcommittee monitored and participated in the census adjustment issue throughout the past year. This issue has the potential to affect the redistricting process in Nevada and most other states.

Nevada should receive the Public Law 94-171 redistricting data by the end of February 1991 which should provide sufficient time to accomplish redistricting during the session. According to the Federal court stipulation, the Secretary of the U.S. Department of Commerce is required to make a decision on the adjustment of the 1990 census on or before July 15, 1991, when the Nevada Legislature probably would be out of session.

A decision to adjust could require modifications in the congressional district boundaries and possibly some legislative boundaries. Such modifications likely would need to be made in a special session. It is generally agreed that, unless congressional action is taken, the adjustment issue will be tied up in the courts for a significant period of time no matter what decision is made.

Most persons involved in reapportionment contend that redistricting should be accomplished with the P.L. 94-171 data due to the unprecedented nature of the adjustment issue and the potential for lengthy delays before it is finally resolved. The subcommittee agrees with this assessment.

Therefore, the subcommittee recommends:

**That the Nevada Legislature accomplish redistricting during the 1991 session with the Public Law 94-171 data.**

If a decision is made after adjournment of the 1991 session to adjust the 1990 census, the Legislature should direct staff to evaluate the changes in the census data and monitor any resulting litigation to provide an analysis of the adjustment decision and its effects on Nevada's redistricting plans. This analysis should be provided to legislative leadership and the Governor to assist in determining the need for and length of a special session to make any necessary modifications.

#### D. GIS DEVELOPMENT

The Nevada Legislature has invested significant funds in the development of a GIS for redistricting and future applications. The following recommendations pertain to this development.

##### 1. Oversight

During the interim period, oversight of the development of the Nevada Legislature's GIS for the redistricting application was provided by the Reapportionment Subcommittee.

There are unlimited possibilities for future applications of the Legislature's GIS after redistricting is completed. The Subcommittee discussed various mechanisms for providing legislative oversight and guidance to staff for continuing applications and enhancements of the Legislature's GIS after reapportionment. The subcommittee agreed that the Nevada Legislature's Legislative Commission provided the most appropriate mechanism.

Therefore, the subcommittee recommends:

That the Legislative Commission provide oversight and staff guidance on future development and applications of the Nevada Legislature's Geographic Information System after completion of the 1991 session and the redistricting process.

##### 2. Access to GIS Data

Late in its study, the subcommittee heard testimony concerning a need to amend the state's laws to deal with access, confidentiality, cost, oversight control and other issues relating to the increased development of GIS data in Nevada's state and local governments.

The subcommittee did not have sufficient time to thoroughly review the details of possible legislation on this topic.

In addition, this issue technically was not within the purview of the subcommittee's study requirements. However, the Subcommittee desired to highlight this issue for consideration during the 1991 session.

Therefore, the subcommittee recommends:

That the appropriate standing committees of the 1991 Legislature provide due and careful consideration to any proposals to amend the laws pertaining to access to public information as they relate to the development of geographic information system technology in Nevada's government sector.



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## APPENDIX A

### Summary Of *Reapportionment Newsletters* - Issues And Topics



## APPENDIX A

### SUMMARY OF REAPPORTIONMENT NEWSLETTERS ISSUES AND TOPICS

The following list provides an index, or summary, of the major topics covered in the six issues of Volume 1 of *Reapportionment Newsletter* with the primary issue highlighted for each:

- Number 1 (November 21, 1989) - Introductory Issue

- Reapportionment Terminology
- Major Changes for the 1990 Census and Redistricting
- Historical Overview of Nevada Legislative Activities
- Reapportionment Tasks and Timelines
- Staff Contacts for Reapportionment

- Number 2 (March 16, 1990) - Census Issue

- Census Promotion
- Census Local Review Program
- The Adjustment Issue
- Staff Activities
- Election Database

- Number 3 (May 23, 1990) - Historical Issue

- Early History
- Major Changes in the 1960's
- Nevada Redistricting in the 1970's
- Nevada Reapportionment in 1981
- Possible Issues in Nevada's 1991 Reapportionment

- Number 4 (July 18, 1990) - GIS Issue

- Nevada Legislature's Geographic Information System
- The Adjustment Issue - An Update
- Postcensus Local Review Program - A Reminder
- Census Information
- Staff Activities

- Number 5 (September 26, 1990) - Legal Issue

- Legal Requirements for Redistricting
- Multi-Member Districts
- Preliminary Census Counts
- Nevada's Priority for Redistricting Data
- Staff Activities and Database Development

- Number 6 (December 6, 1990) - Recommendations Issue

Recommendations of the Reapportionment Subcommittee  
The 1991 Redistricting Committees  
GIS Development and Contractor Activities  
Census Notes and Local Review Program  
Elections Database  
Summary of Previous Newsletters

APPENDIX B

*Reapportionment Newsletter* No. 3 -  
History Of Reapportionment In Nevada





# REAPPORTIONMENT NEWSLETTER



NEVADA STATE LEGISLATURE

LEGISLATIVE COUNSEL BUREAU

VOLUME 1, NUMBER 3

MAY 23, 1990

## INTRODUCTION

This special issue of Reapportionment Newsletter focuses on the history of reapportionment and redistricting in Nevada. It is intended to assist legislators and other interested persons in understanding the context of redistricting in the state and its effects on representation in the Nevada Legislature. The discussion concludes with some observations about possible issues for the 1991 redistricting task.

The bibliography at the end of this newsletter lists the primary sources for this historical information. Special thanks are extended to Eleanore Bushnell, Ph.D., formerly with the University of Nevada, Reno and now retired, whose articles during the 1970's provide the most comprehensive and informative discussions of the state's reapportionment history. The numbers in parentheses in the following text indicate the citations by source and page numbers, respectively, from the bibliography.

## EARLY HISTORY

Since statehood in 1864, several original provisions in the Nevada Constitution have governed the composition of the legislature. Article 15, Section 6 provides that "The aggregate number of members of both branches of the Legislature shall never exceed seventy-five." Article 4, Section 5 states in part that "... the number of Senators shall not be less than one-third nor more than one-half of that of the members of the Assembly." (8,159)

The first Nevada Legislature consisted of 54 members—18 Senators and 36 Assemblymen. From 1864 until 1919, the composition of the legislature was changed 16 times—ranging from a low of 45 members (15 Senators and 30 Assemblymen) from 1893 through 1899 to the maximum of 75 members from 1875 through 1879 (25 Senators and 50 Assemblymen) and 1913 through 1915 (22 Senators and 53 Assemblymen). (8,168-170) Many of these changes likely resulted from population increases and decreases due to "boom and bust" cycles in the mining industry and other factors throughout the state.

Two other original provisions of the Nevada Constitution provided for representation based on population for both houses of the state legislature. Article 1, Section 13 states that "Representation shall be apportioned according to population." Article 15, Section 13 provides that the federal census "... shall serve as the basis of representation in both houses of the legislature."

These constitutional provisions were routinely ignored over the years. From 1919 to 1965, the

Senate was apportioned on the basis of one Senator from each county and the Assembly also had at least one representative from each county. Throughout this period, the Nevada Senate consisted of 17 members; and the Assembly changed from 37 members in 1919 to 40 in 1931, 41 in 1945, 43 in 1947, 47 in 1951, and back to 37 members in 1961. (8,170)

Article 4, Section 5 of the Nevada Constitution was extensively amended in 1950 to conform to the redistricting practice in effect since 1919. Provisions were added for equal representation of counties in the Senate, at least one seat for each county in the Assembly, and mandatory reapportionment of the legislature after each decennial census. However, this amendment was made without changing the other two original constitutional provisions that provided for representation based on population for both houses of the legislature. (8,160) These conflicting provisions remained in the state's constitution until 1970.

The 1961 legislative reapportionment—based on the 1960 census—required a drastic realignment of representation to account for the state's rapid growth and the increased concentration of population in Clark (the Las Vegas area) and Washoe (the Reno area) counties. While the Senate remained under the "little federalism" model with one senator for each of the state's 17 counties, it became evident that only a reduction in the overall size of the Assembly would assure the best ratio of representation for the smaller counties. Therefore, a reapportion-

tionment act was adopted in 1961 to reduce the Assembly from 47 to 37 members. (8,160)

Clark and Washoe counties were given 21 assemblymen (12 and 9 respectively), or about 57 percent of the Assembly, even though they contained about

75 percent of the state's population at that time. The 1961 reapportionment did not accomplish a redistricting that closely reflected population, but it indicated the Legislature's recognition that population-based apportionment was becoming a crucial, nationwide issue. (1,188)

## MAJOR CHANGES IN THE 1960'S

When the United States Supreme Court entered the "political thicket" of reapportionment with its landmark decisions in cases such as Baker v. Carr in 1962 and Reynolds v. Sims in 1964, the effects were felt in state legislatures throughout the country and particularly among the 13 Western states.

### The Western States

Area based representation in the upper house (the "little federal plan") was a cherished tradition in Nevada and most of the other Western states. Except for Oregon, no Western state followed an apportionment plan based on population for both houses until after the Reynolds decision, and court orders were necessary to effect this change in 12 of the 13 states. (1,1)

Resistance to the population-based requirement was high in the West. Special legislative sessions were required in 8 Western states, including Nevada, as a result of the failure to act by the legislatures or the rejection by the courts of plans that were not consistent with the "one-man, one-vote" principle. (1,24)

The courts in four Western states drafted and imposed reapportionment plans due to the failure of the legislatures to adopt acceptable plans. The plans of 5 Western states were subjects of U.S. Supreme Court decisions. And the state or federal courts were involved in 8 Western states, including Nevada, before those legislatures acted to establish population-based apportionment. (1,24) Even when the Western states did adopt population-based plans, their deviations were farther from the "one-man, one-vote" rule than was the case in the Nation's other 37 states. (1,1)

### Nevada's Reaction

Following the Supreme Court's Reynolds decision in 1964, Flora Dungan (a Democratic member of the Assembly from Clark County who served in the 1963 and 1967 regular sessions) and C.W. Woodbury, M.D., another Las Vegas resident, filed suit in federal district court to challenge Nevada's apportionment scheme. With the Legislature scheduled to meet in January 1965, the court ordered the convening of a three-judge panel in June 1965 if the Legislature failed to act in regular session to adopt a reapportionment plan under the "one-man, one-vote" guidelines. (2,104)

The 1965 Nevada Legislature was duly warned, but it adjourned without taking appropriate action. Six measures relating to reapportionment were introduced, but only one was passed—a resolution, similar to those passed by many other state legislatures, asking Congress to propose an amendment to the U.S. Constitution to allow one house of a state legislature to be apportioned on factors other than population. Such an amendment was introduced in Congress but was defeated in the U.S. Senate. (2,104 and 105) One reapportionment bill in the 1965 Nevada Legislature made it to the floor of the Assembly, but the measure was rejected by an 18 to 17 vote and was never considered in the Senate. (1,190)

Therefore, the federal court heard the case of Dungan v. Sawyer and found Nevada's apportionment scheme to be invidiously discriminatory and unconstitutional. The court noted the failure to act by the 1965 Legislature and cited certain population disparities.

For example, according to the 1960 census, Clark County had 127,016 persons or 44.52 percent of the state's population and was represented by one senator and 12 assemblymen. Storey County, on the other hand, had a population of 568 and was represented by one senator and one assemblyman. The Clark/Storey ratio of representation per person was more than 223:1 for the Senate and almost 19:1 for the Assembly. In other words, one person's vote in Storey County was equivalent to the vote of 223 and 19 persons, respectively, in Clark County for the Senate and Assembly. The court cited other disparities and pointed out that less than 8 percent of the state's population controlled more than 50 percent of the Senate. (3,486)

In its decision on September 23, 1965, the court ordered that the Governor (Grant Sawyer) call a special session of the Nevada Legislature to convene no later than October 30, 1965, for the sole purpose of reapportionment; that the Legislature submit a constitutionally valid plan to the court by November 20, 1965; and that it would reapportion the state or order at-large elections if a valid plan was not adopted. (3,490)

### The 1965 Special Session

The 1965 special session convened on October 25 and adjourned on November 13, 1965. The session was characterized by anger, attacks on the U.S. Supreme Court, hostility and dismay. (1,193 and 5,202) Resolutions were introduced, and defeated, to fly the flag at half mast during the special session, to amend the U.S. Constitution to provide for the election of federal judges, and to create a unicameral legislature.

At least 20 plans were introduced to reapportion the state, and a final plan was adopted to increase each chamber by 3 seats—to 20 members elected from 13 districts in the Senate and 40 members elected from 16 districts in the Assembly. In the Senate, Clark County had 8 members, Washoe-Storey 6 members, and the rural counties 6 members. The Assembly had 16 members from Clark, 12 from Washoe-Storey and 12 from the rural counties.

On March 21, 1966, the three-judge federal district court panel reluctantly ruled that the adopted plan was constitutional and approved. The court noted that the greatest variation from the average district population in the Senate plan was 21.2 percent and that 49.7 percent of the population was required to elect a majority of senators. The greatest variation in the Assembly plan was 22.4 percent and 46.8 percent of the population was required to elect a majority of assemblymen. (4,357)

The court was not particularly concerned about the maximum deviations since they were caused by one

small county district in each house. The plan was approved on the basis of other statistical tests, such as the population majorities and variance ratios, which just came within the limits established by previous court cases in the Nation. However, the court noted that the adopted reapportionment plan " . . . is not the fairest and best plan that the Nevada Legislature could possibly enact." (4,358)

The court's opinion concluded as follows:

"We find that Nevada's malapportioned, rural-dominated Legislature, ordered by this Court into special session, after much 'travail, frustration, boredom, clowning, hard work, hot anger, honest compromise, barely concealed self-interest, enlightened statesmanship and even tears', obviously guided by able legal counsel, has given birth to a plan which this Court cannot say is constitutionally impermissible. While it is quite apparent to the Court that the rural-dominated Legislature gave up no more than it believed it must, this, in itself, does not warrant disapproval. It matters not that the Legislature may have skated upon thin ice and approached dangerously close to the edge of unconstitutional waters." (4,359)

The 1965 reapportionment plan was in effect for three legislative elections (in 1966, 1968 and 1970) before the Nevada Legislature had to jump back onto the ice after the 1970 decennial census.

## NEVADA REDISTRICTING IN THE 1970'S

Redistricting in the 1971 session of the Nevada legislature was characterized by greater acceptance of population-based apportionment and the establishment of single-member districts in the Assembly. The primary advocate of single-member districts was Frank Young—a three-term Republican assemblyman from Clark County—who is credited with accomplishing this change through careful preparation, energetic campaigning among his colleagues, and parliamentary skill. (2,107 and 5,203)

The Senate resisted this change and retained multi-member districts largely because that system protected incumbents in both Las Vegas and Reno who lived in relatively close proximity to each other. (5,203) Incumbent protection was another major characteristic of the 1971 redistricting effort. Under the new single-member district system in the Assembly, this factor resulted in some odd boundaries that were reminiscent of the more traditional partisan gerrymander. (5,204)

The 1971 redistricting plan retained the same composition of the two houses—20 members in the Senate and 40 in the Assembly. However, for the first time, Clark County gained majority representation in both houses. Clark County had 11 senators and 22 assemblymen; Washoe County had 5 senators and 10 assemblymen; and the rural counties were reduced to 4 senators and 8 assemblymen.

The effects of this redistricting on rural incumbent legislators were particularly noteworthy. The 1972 General Election resulted in 3 incumbent versus incumbent races in the rural counties. William D. Swackhamer (D), a 26-year veteran of the Assembly and its former Speaker, was defeated by Melvin (Bode) Howard (R), a 12-year Assembly member at the time of the 1972 election. Other rural casualties of the 1971 reapportionment were Assemblyman Norman D. Glaser (D) who was defeated by Assemblyman Roy Young (R), and Senator John Fransway (R) who lost to Senator Warren L. Monroe (D).

While the 1971 redistricting plan more closely reflected the state's population distribution, it contained some large disparities. The greatest ratio of disparity between the largest and smallest districts was 28 percent in the Senate and 38 percent in the Assembly. These disparities and the retention of multimember districting in the Senate resulted in further lawsuits following the 1971 redistricting. (5,204)

Two court cases were filed—Stewart v. O'Callaghan and Millspaugh v. O'Callaghan—and they were consolidated by the U.S. District Court since they dealt with the same issues. The case was heard in December 1971 and a decision was rendered on May 18, 1972. The court noted the unique demographic and geographic problems between the rural and urban areas of the state and essentially upheld the plan. A correction was ordered to be

made between two assembly districts that resulted from a staff error in the allocation of population. In addition, the court ordered the 1973 session of the Nevada Legislature to correct population deviations among 5 rural Assembly districts and 2 rural Senate districts which it found to be beyond tolerable limits. (7,1086 and 1087)

The court also upheld the use of multimember districts in the Senate, indicating that they are not inherently unconstitutional unless it is shown that they " \* \* \* operate to dilute or cancel the voting strength of any segment of political grouping." (7,1083)

The 1973 session made the appropriate adjustments to the rural districts. The largest ratios of disparity consequently were reduced to 17.6 percent in the Senate and 21 percent in the Assembly.

## NEVADA REAPPORTIONMENT IN 1981

In contrast to the earlier redistricting efforts, the 1981 reapportionment of the Nevada Legislature was relatively free of conflict. Key legislators from the major urban and the rural areas worked with their colleagues to resolve differences between district boundaries. The politics of incumbency again was the major factor in the development of plans.

General agreement occurred early in the session to increase the size of the legislature by 1 Senate and 2 Assembly seats—to a total of 21 and 42 respectively—to account for the population growth in Clark County. The Senate made a determined and successful effort to limit multimember districts to no more than 2 members, in contrast to the 1971 redistricting which included one 7-member Senate district in Clark County.

The final plan resulted in 12 senate and 24 assembly seats in Clark County, 5 senators and 10 assemblymen in Washoe County, and 4 senators and 8 assemblymen in the remainder of the state. With only a couple minor exceptions, each senate district was comprised of two assembly districts. The greatest ratios of disparity between the largest and smallest districts were 8.5 percent for the Senate and 10.2 percent for the Assembly.

The 1981 Legislature also faced the task of reapportioning congressional districts since Nevada was

allocated, for the first time, a second representative in the U.S. House of Representatives. The major controversy involved whether to establish the boundary between the two congressional districts as a north-south line through the population centers of Las Vegas and Reno or as an east-west line through Clark County.

The north-south proponents argued the theory that both representatives would have a statewide perspective, while opponents saw it as a way for Clark County to control both Congressional seats. The east-west advocates pointed out that the theory of the U.S. Constitution indicates that the Senate reflects statewide interests and the House local interests. The east-west proponents prevailed with the boundary established through the northern portion of Clark County.

No court challenges were discussed or filed pertaining to any of the redistricting plans adopted by the 1981 Nevada Legislature.

The following tables demonstrate the increasing size of state legislative districts, and the progress made over the past 3 decades in Nevada toward achieving population equality between state legislative districts through redistricting.

Average (Ideal) Population per Legislator

<u>Year</u>	<u>Senate</u>	<u>Assembly</u>
1965	14,264 *	7,123 *
1971	24,437 *	12,218 *
1981	38,056 **	19,028 **
1991 (projected)	60,970 **	30,485 **

\* - 20-member Senate and 40-member Assembly.

\*\* - 21-member Senate and 42-member Assembly.

Largest Ratio of Disparity

(Between largest and smallest district.)

<u>Year</u>	<u>Senate</u>	<u>Assembly</u>
1965	47.3%	52.8%
1971	28.0%	38.4%
1973	17.6%	21.0%
1981	8.5%	10.2%

**POSSIBLE ISSUES IN NEVADA'S 1991 REAPPORTIONMENT**

The following discussion highlights several issues which may arise relating to the redistricting effort of the 1991 Nevada Legislature. These issues pertain to state legislative seats, the Congressional districts, greater population equality and the adjustment issue.

**State Legislative Seats**

State population projections show that since 1980: (1) Clark County has experienced a rate of growth which is higher than the state average; (2) rural Nevada, largely because of the recent mining boom, has had a rate of growth which is slightly more than the state average; and (3) the Washoe-Carson area, while experiencing significant growth, has increased population at a rate less than the state average. (As noted previously, the Nevada Legislature currently consists of 12 senators and 24 assemblymen from Clark County, 6 senators and 12 assemblymen from the Washoe-Carson area, and 3 senators and 6 assemblymen from the rural areas.)

According to the state's preliminary population forecasts for 1990 from the Department of Administration and the State Demographer, Nevada's total population is projected at 1,280,380. If the 1990 census results come close to this figure and the current configuration of the legislature is retained at 63 members, then each Assembly district ideally would include about 30,485 persons, with 60,970 for each Senate district. (Note: The state's population projections may be somewhat higher than the actual census results, but it is expected that the percentage distribution of the population in the state should be nearly the same.)

The state's projections for 1990 indicate that Clark County has a population of 794,140; the Washoe-Carson area has 298,990; and the remainder of the state in the rural areas is at 187,250. Dividing these numbers by the ideal Assembly district figure indicates that Clark County would have sufficient population for 26 seats, the Washoe-Carson area would have 10 seats and the rural areas 6 seats. Thus, a

63-seat legislative plan would require a shift of 2 Assembly seats and 1 Senate seat from the Washoe-Carson area to Clark County, and rural representation would remain essentially at the current level.

At the other extreme, under a maximum 75-member body (25 Senators and 50 Assemblymen), the ideal Assembly district would include 25,608 persons. Under this scenario, the Washoe-Carson area would retain its current level of representation at 12 resident assemblymen, the Clark County population would qualify it for 31 assemblymen, and the rural areas would have the population to support 7 representatives.

The first opportunity the state will have to verify its population projections will be in August 1990 upon receipt of the preliminary census counts from the Census Bureau's Local Review Program. Detailed census data to actually accomplish redistricting will not be available from the Census Bureau until on or before April 1, 1991.

Several factors likely will be considered by the 1991 Legislature in determining the total size of that body over the next ten years. Among other things, these factors include: (1) the possible loss of representation in certain geographical areas; (2) the total number of people per legislative district; (3) the immense geographical area covered by some rural districts; (4) the direct and indirect costs of adding additional legislators; and (5) the adequacy of space in the Legislative Building (currently, the Senate chambers are designed for a maximum of 25 members, and the Assembly chambers for 48 members).

**Congressional Districts**

Current population projections indicate that Nevada will not have sufficient population in 1990 to qualify for a third congressional seat.

It is possible that the issue of using a north-south line, rather than the current east-west boundary through Clark County, for the congressional dis-

tricts could be revisited in the 1991 session. However, if the current concept is retained, a greater percentage and number of Clark County residents will be required in the "Northern" district. In the 1981 reapportionment, 15.6 percent of the population in District 2 (Northern) came from Clark County. According to current state population forecasts, about 24 percent of that district's population could consist of Clark County residents after redistricting in 1991.

#### Greater Population Equality

In previous reapportionment efforts in Nevada and other states, it has been difficult to attain precise population equality among legislative districts because of the use of large enumeration districts in rural areas. In 1980 in Nevada, these enumeration districts ranged from 0 to 6,000 persons in population.

However, for the 1990 census, the Census Bureau has block numbered the entire country. The level of detailed census data in Nevada is estimated to increase from slightly less than 9,000 blocks in

1980 to about 52,000 blocks or more in 1990. This detailed data could enhance efforts to increase population equality among state legislative districts.

The largest ratio of population disparity between legislative districts in Nevada has decreased consistently over the years with subsequent redistricting. With increased block data throughout the state and the country, legislatures will be able to achieve, and the courts probably will require, even lower ratios of population disparity among state legislative districts.

#### Adjustment

Another potential issue for all states relates to the possible adjustment of the 1990 census for an undercount or overcount. (See discussion in previous issue of *Reapportionment Newsletter*, Volume 1, Number 2) According to the federal court settlement, a final decision on an adjustment is to made by July 15, 1991. If the census is adjusted, any plans developed by the Nevada Legislature during the 1991 session could be subject to modifications based on the adjusted counts.

### CONCLUSION

Nevada has had an interesting history concerning the reapportionment of its legislature, particularly during the 1960's and 1970's. While the 1981 redistricting was relatively noncontroversial, many

factors at both the national and state levels indicate that the task may be more challenging and complicated in 1991.

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- 3) Dungan v. Sawyer, 250 Federal Supplement 480 (1965).
- 4) Dungan v. Sawyer, 253 Federal Supplement 352 (1966).
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- 6) Research Division, Legislative Counsel Bureau, "Reapportionment Update," Nos. 1-12, Feb. 16 through May 29, 1981, newsletters published during the 1981 session.
- 7) Stewart v. O'Callaghan, Millsbaugh v. O'Callaghan, 343 Federal Supplement 1080 (1972).
- 8) Swackhamer, Wm. D., Secretary of State, Political History Of Nevada 1986, Eighth Edition, State Printing Office, Carson City, Nevada, pp.159-186.

### STAFF CHANGE

The following change should be noted on information presented in Volume 1, Numbers 1 and 2 of the *Reapportionment Newsletter*:

John R. Crossley, Director, replaces Steven J. Watson, former Acting Director, on the list of staff contacts for reapportionment for overall coordination.

## APPENDIX C

### Proposed Redistricting Rules



PROPOSED RULES FOR REDISTRICTING  
BY THE NEVADA LEGISLATURE

To promote the development of constitutionally acceptable redistricting plans, the committees with responsibility for redistricting (redistricting committees) adopt the following rules to constitute minimally acceptable criteria for legislative reapportionment and redistricting.

I. EQUALITY OF REPRESENTATION

1. Equality of population of state legislative districts with only minor deviations is the goal of legislative redistricting.
  - a. Deviations from the "ideal district" population should be justifiable either as a result of the limitations of census geography, or as a result of the promotion of a rational state policy including, but not limited to, respect for the traditional political geography and natural geography of the state, protection of a recognized community of interest, and the development of reasonably compact and contiguous districts.
  - b. In order to meet constitutional guidelines for legislative districts, no plan, or proposed amendment thereto, will be considered which results in an overall range of deviation in excess of ten percent (10%), or a relative deviation in excess of ± five percent (5%) from the ideal district population.
2. Equality of population of congressional districts insofar as is practicable is the goal of congressional redistricting.
  - a. Any population deviation among the congressional districts from the "ideal district" population must be necessary to achieve some legitimate state objective (for example, making districts compact, respecting political boundaries and so forth).
  - b. In order to meet constitutional guidelines for congressional districts, no plan, or proposed amendment thereto, will be considered which results in an overall range of deviation in excess of one percent

(1%), or a relative deviation in excess of  $\pm$  one-half percent (0.5%) from the ideal district population.

3. Equality of population in accordance with the standards for legislative redistricting is the goal of redistricting for the State Board of Education and the State Board of Regents.

## II. POPULATION

1. The total state population, and the population of defined subunits thereof, as determined by the 1990 Federal Decennial Census shall be the exclusive data base for redistricting by the Nevada Legislature.
2. Such 1990 census data as validated through the data verification program of the staff of the Legislative Counsel Bureau in cooperation with its contractor (Environmental Systems Research Institute, Inc.) shall be the exclusive data base used for the evaluation of proposed redistricting plans for population equality.

## III. DISTRICTS

1. Each state senate district must be coterminus with adjoining assembly districts and have its borders set out by reference to those assembly districts.
2. All district boundaries created by a redistricting plan must follow the census geography.

## IV. PROTECTION OF MINORITY VOTING STRENGTH AND MINORITY PARTICIPATION

1. The dilution of minority voting strength is contrary to public policy. The right of meaningful political participation of minority citizens is recognized. Accordingly, any proposed redistricting plan, or amendment thereto, demonstrated to have the objective or consequence of diluting the voting strength of minority citizens is unacceptable.
2. The redistricting committees will not consider a plan which shows evidence of violating section 2 of the Voting Rights Act. Section 2 of the Voting Rights Act prohibits any state from imposing any voting

qualification, standard, practice or procedure that results in the denial or abridgment of any United States citizen's right to vote on account of race, color or status as a member of a language minority group. Section 2 is applicable to all states and prohibits purposeful discriminatory practices or practices which result in discrimination. Redistricting is an election practice which must comply with the provisions of section 2 of the Voting Rights Act.

3. The redistricting committees will not consider a plan which shows evidence of packing minority districts ("packing" is drawing district boundary lines so that the members of a minority group are concentrated, or "packed," into as few districts as possible). The redistricting committees also will not consider a plan which shows evidence of fracturing minority districts ("fracturing" is drawing district lines so that the minority population is broken up among several districts to deprive the minority population of its voting strength in a single district).

#### V. PUBLIC PARTICIPATION

1. The redistricting committees seek active and informed public participation in all their activities and the widest range of public information and citizen input into their deliberations. Accordingly:
  - a. Notices of all meetings of the committees will be transmitted to any citizen or organization within the State of Nevada requesting the same, without charge.
  - b. Through the auspices of the Legislative Counsel Bureau, copies of the validated census data base, and all other data bases available to the committees will be provided in hard copy form to any person at cost.
  - c. Copies of all maps prepared at the direction of the committee will be made available for review by any member of the public.
  - d. All interested persons are encouraged to appear before the redistricting committees and to give their comments and input regarding legislative redistricting. Reasonable opportunity will be afforded to such persons, consistent with the

criteria herein established, to present plans or amendments to plans for legislative redistricting to the committee if desired, unless such plans demonstrably fail to meet the minimally acceptable criteria herein established.

## APPENDIX D

Subcommittee Letter Dated January 29, 1990, To  
Comment On Proposed Adjustment Guidelines



JAN EVANS  
Assemblywoman  
Washoe No. 30  
3250 Wilma  
Sparks, Nevada 89431  
(702) 356-7122



## COMMITTEES

### Member

Ways and Means  
Transportation  
Elections

### SUBCOMMITTEE ON WAYS AND MEANS

#### Chairman

Welfare/Youth Services/Aging

#### Member

Education, Elementary and  
Secondary Education

# Nevada Legislature

## SIXTY-FIFTH SESSION

January 29, 1990

Michael R. Darby  
Under Secretary for Economic Affairs  
Room 4848, Herbert C. Hoover Building  
United States Department of Commerce  
Washington, D.C. 20230

Dear Mr. Darby:

This letter is submitted on behalf of the Legislative Commission's Subcommittee on Reapportionment of the Nevada State Legislature to provide comments on the proposed guidelines for considering whether or not a statistical adjustment of the 1990 decennial census of population and housing should be made for the coverage of deficiencies resulting in an overcount or undercount of the population (Docket No. 91282-9282).

The Subcommittee on Reapportionment was created by the 1989 session of the Nevada Legislature with the adoption of Assembly Concurrent Resolution No. 15 (File No. 176, Statutes of Nevada 1989 at pages 2354-2355). This measure directed the Legislative Commission to study the requirements for reapportionment in this state in conjunction with the data from the 1990 decennial census. The Subcommittee is a bipartisan, joint body consisting of eight legislative members who represent the major rural and urban areas of the state.

At its meeting on January 25, 1990, in Carson City, Nevada, the Subcommittee on Reapportionment reviewed the proposed adjustment guidelines and voted unanimously to submit the following comments.

The Subcommittee strongly supports the proposed guidelines and urges the United States Bureau of the Census in the Department of Commerce to conduct the most complete and accurate count of the population possible for the 1990 census to preclude any need for an adjustment.

The Nevada Constitution requires the state legislature to accomplish reapportionment in the first session after the taking of the decennial census. The existing April 1, 1991, deadline for the provision of redistricting data to the states allows the Nevada Legislature to accomplish reapportionment within its constitutional mandate. The Legislature historically has adjourned well before July 15 in session years. Therefore, if a decision is made on July 15, 1991, to adjust the 1990 census counts, the state's political process would be severely impacted and a special session would be required to modify redistricting plans at significant expense to Nevada's state government and its citizens.

The Subcommittee supports the proposed guidelines because they appear to be fair and reasonable. We interpret these guidelines as criteria which would allow an adjustment only under extraordinary circumstances in which an adjustment would be irrefutably proven to be more accurate at all levels of the census data and would be understandable and acceptable to the public.

The Subcommittee particularly supports guideline numbers 1, 6, 7 and 8. Guidelines 1 and 7 especially are important to the redistricting process in Nevada. We anticipate that many state legislative districts will require the use of block level data to accomplish population equality. In addition, the judicial requirement for nearly equal congressional district populations also makes it necessary to use block data. Therefore, it is imperative to the integrity and validity of the redistricting process that any adjustment must be shown to be more accurate down to the census block level.

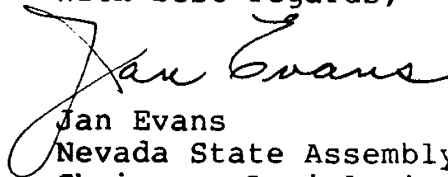
We also believe that guidelines 6 and 8 are critical to any adjustment decision. The rationale for the adjustment must be easily understood by the public to adequately justify the disruption that obviously would be caused. There is no doubt that Nevada and many other states would be required to bear additional expenses to successfully complete the redistricting process if an adjustment is made. These expenses and the further controversy that would result must be clearly and easily justifiable to avoid a loss of faith by the public in the process of allocating political representation.

Nevada's Subcommittee on Reapportionment strongly supports the proposed guidelines as written. The decennial census has served as a standard throughout our Nation's history. If the census is to be statistically adjusted for the first time ever, it must be thoroughly justified and irrefutably proven to be more accurate

and useful. We believe that the proposed guidelines establish criteria that would allow an adjustment only under such extraordinary circumstances. The Subcommittee urges the U.S. Department of Commerce to adopt the adjustment guidelines as proposed.

Thank you for your consideration and the opportunity to comment on this action.

With best regards,

A handwritten signature in cursive script, appearing to read "Jan Evans".

Jan Evans  
Nevada State Assemblywoman  
Chairman, Legislative  
Commission's Subcommittee  
on Reapportionment

JE/sla:R,L1

cc: Acting Governor Robert J. Miller  
U.S. Senator Richard H. Bryan  
U.S. Senator Harry Reid  
U.S. Representative James H. Bilbray  
U.S. Representative Barbara Vucanovich  
Senator William J. Raggio  
Speaker Joseph E. Dini, Jr.  
Secretary of State Frankie Sue Del Papa



## APPENDIX E

### Final Guidelines On Proposed Adjustment Guidelines



BILLING CODE: 3510-EA

DEPARTMENT OF COMMERCE

(DOCKET NO. 91282-0068)

**FINAL GUIDELINES FOR CONSIDERING WHETHER OR NOT A STATISTICAL ADJUSTMENT OF THE 1990 DECENNIAL CENSUS OF POPULATION AND HOUSING SHOULD BE MADE FOR COVERAGE DEFICIENCIES RESULTING IN AN OVERCOUNT OR UNDERCOUNT OF THE POPULATION**

**AGENCY:** Office of the Under Secretary for Economic Affairs, U.S. Department of Commerce

**ACTION:** Final Notice

**SUMMARY:**

These Final guidelines are published pursuant to the Stipulation and Order agreed to by the Federal Government and the City of New York and others in the case of City of New York et al., v. Department of Commerce, et al. Docket No. 88 Civ. 3474 (U.S. Dist. Ct., EDNY filed November 3, 1988) (The "Stipulation"). The purpose of this notice is to inform the public about these final guidelines.

On Monday, December 11, 1989 the U.S. Department of Commerce published proposed guidelines in the Federal Register (F.R. Vol. 54, No. 236, Part XI pp 51002-51005). This notice requested comments from the widest possible audience and set the due date of January 25, 1990 for receipt of comments. On January 24, 1990 a second notice was announced in the Federal Register, (F.R. Vol. 55, No. 16, p. 2397) extending the last date for comments to February 2, 1990.

**EFFECTIVE DATE:** (Please insert date of publication in the Federal Register)

**FOR FURTHER INFORMATION CONTACT:** Mark W. Plant, Deputy Under Secretary for Economic Affairs, U.S. Department of Commerce, Room 4848 Herbert C. Hoover Building, Washington, D.C. 20230.

**SUPPLEMENTARY INFORMATION:**

**Background**

Paragraph 4 of the Stipulation provides, in part, that "...the Department will promptly develop and adopt guidelines articulating what defendants [Department of Commerce] believe are the relevant technical and nontechnical statistical and policy grounds for decision on whether to adjust the 1990 Decennial population counts."

Paragraph 4 of the Stipulation goes on to state that the Department's proposed guidelines shall be published in the Federal Register by December 10, 1989, with a request for comments, and then published in final form in the Federal Register by March 10, 1990. Because December 10, 1989, fell on a Sunday, the publication in the Federal Register of the proposed guidelines occurred on Monday, December 11, 1989.

Paragraph 5 of the Stipulation and Order states that the "Defendants [Department of Commerce] shall determine whether an adjustment satisfies the guidelines specified in para. 4 hereof [above]. If the Secretary determines to make an adjustment, defendants [Department of Commerce] shall publish corrected 1990 Decennial Census population data at the earliest practicable date and in all events, not later than July 15, 1991."

Paragraph 5 of the Stipulation and Order goes on to state that "If the Secretary determines not to make an adjustment, defendants [Department of Commerce] shall publish at the earliest practicable date and, in all events, not later than July 15, 1991, a detailed statement of its grounds, including a detailed statement of which guidelines in para. 4 above were not met and in what respects such guidelines were not met."

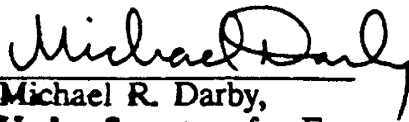
Copies of all comments received pursuant to the request for comments were made and are available for public inspection in the Department's Central Reference Records and Inspection Facility, Room 6628 in the Hoover Building.

One hundred fifty six (156) letters were received commenting on the proposed guidelines. There were responses from thirty-six (36) States, eight (8) Cities, sixteen (16) private individuals (including four [4] members of the Secretary's Special Advisory Panel), seventy-eight (78) members of the U.S. House of Representatives, three (3) members of the U. S. Senate, seven (7) Governors of the States, nine (9) interest groups, two (2) Federal agencies, and seventy-four (74) members of State legislatures representing thirty-six (36) States. We also received comments orally from attorneys representing plaintiffs in the lawsuit cited in the "SUMMARY" during a meeting at the Department of Commerce on March 6, 1990. The comments made during this meeting are included in the administrative record, and are available for public inspection in Room 6628 of the Hoover Building.

Among the total responses were seventy-six (76) expressions of support for the complete set of proposed guidelines, four hundred and forty-nine (449) expressions of specific support for specific guidelines, sixty-five (66) expressions of disapproval of the entire set of proposed guidelines, five hundred and forty seven (547) expressions of disapproval for specific proposed guidelines, and one hundred sixty seven (167) comments on specific proposed guidelines which expressed neither approval nor disapproval.

Thirty (30) commentators asserted that there should be no adjustment of the Census enumeration regardless of the circumstances; two (2) commentators expressed the opinion that the Census enumeration should be adjusted under any circumstances.

Dated: March 12, 1990

  
Michael R. Darby,  
Under Secretary for Economic Affairs

## INTRODUCTION

Article I, *Section 2*, Clause 3, of the Constitution of the United States reads, in part:

Representatives and direct Taxes shall be apportioned among the several States which may be included within the Union, according to their respective Numbers, which shall be determined by adding to the whole Number of free Persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three fifths of all other Persons. The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such Manner as they shall by Law direct.

Amendment 14, *Section 2*, to the Constitution, reads in part:

Representatives shall be apportioned among the several States according to their respective numbers, counting the whole number of persons in each State, excluding Indians not taxed.

The orderly redistribution of political representation, which in the ordinary course of events means transfer of political power, is effected on the basis of the decennial census. The decision on whether to adjust the 1990 census for net undercounts or net overcounts has substantial consequences. Whatever decision is made, it will affect the nation for at least the next ten years. It is not a simple technical decision: It is a momentous decision which will be made by the Secretary of Commerce, an official appointed by the President and confirmed by the Senate.

The basic decision the Secretary will face is whether the counts are made more accurate by adjustment or whether an adjustment would introduce more error into the census counts. He must also take account of other implications of his decision on the public. These guidelines are written to ensure that the counts produced from the 1990 census are the most accurate that can practically be produced. They are intended to provide a framework for a balanced consideration by the Secretary as to whether to adjust the census enumeration. In that framework, the quality of the census and the degree of accuracy of the census enumeration play fundamental roles.

Enumeration is the basic procedure for counting the population that is mandated by the Constitution. Accordingly, throughout its history the Census Bureau has developed, refined, and increased the precision of the methods involved in that procedure. Those refinements and the improvements in the count that they have brought about have given us great confidence in the basic census procedure. Thus, we view enumeration as the basis for the census counts, and require that statistical techniques used to modify the counts in an attempt to improve them be subject to close scrutiny. This is not a bias against adjusting the counts for net undercount or net overcount. Rather, it is a prudent stance that requires that procedures that infer population counts be shown clearly to yield better counts, that is, counts subject to smaller errors than the enumeration procedures themselves. The true population may, in statistical theory, be inherently unknowable, but

the enumeration must necessarily be considered closest to the true population count unless convincing evidence can be marshalled to show otherwise. Furthermore, this evidence must also allow us to generate better counts -- it cannot just show deficiencies in the enumeration. It must enable us to correct those deficiencies.

Much of the confusion that surrounded the proposed guidelines stemmed from differing visions of the census process. The census process is divided into several distinct phases. The first phase is the enumeration of the population. The second phase is the conduct of a post-enumeration survey, based on a probability sample of housing units. This sample provides data for three purposes: evaluation of the accuracy of the enumeration, assessment of the net overcount or undercount of basic enumeration subgroups using the capture-recapture methodology and, should it prove desirable, calculation of weights for the adjustment of the enumerated counts. The third phase of the census process is a determination of the adequacy of the post-enumeration survey as an evaluation and adjustment tool.

If a determination is made that the census enumeration counts are flawed, that the post-enumeration survey is adequate and accurate, and that the application of the weights generated by the post-enumeration survey would result in more accurate counts, then the census counts could be adjusted.

For these reasons, we view the census enumeration as an operation distinct and separable from the operations used to evaluate the enumeration. We, therefore, do not subscribe to an integrated view of the census, where enumeration and evaluation are inextricably bound together to produce counts. The enumeration produces counts which are subsequently evaluated. Should the evaluation show them deficient and correctable into more accurate counts, a decision can be made to adjust. Thus, sacrificing any parts of the enumeration and replacing them with evaluation activities is not appropriate. It is from this view of the census that the guidelines are drawn.

It is worth noting that the technical grounds for adjustment are contained in these guidelines in a manner that is intended to be understandable to the general public. The level of detail that some members of the public would desire is greater judging from the comments on the proposed guidelines. In consideration of this desire, the Department of Commerce will publish a detailed outline of technical operations and procedures. The Department of Commerce and the Bureau of the Census will keep the public informed as plans for implementing the procedures leading to an adjustment decision progress.

The guidelines will be weighed collectively. Not every consideration in each guideline need be completely satisfied or resolved in order to reach a decision. The issues of accuracy, fairness, disruption, and constitutionality must be addressed together in making the decision on whether an adjustment will increase the accuracy of the 1990 Census sufficiently to proceed with it.

The Department of Commerce will rely on the Bureau of the Census to implement the technical operations and procedures used in the decision making process. These include operations to evaluate the accuracy of the census enumeration and the proposed

adjustments to the census enumeration, the reliability of statistical models used in the adjustment process and the quality of the resulting estimates. The Bureau of the Census will use the highest levels of professional standards in carrying out these operations, procedures and evaluations, and will document all their judgments in a way that allows the statistical community to evaluate them. Ultimately, however, the Secretary will, in the exercise of his sound discretion, determine whether to adjust the census.

Each of the following guidelines is accompanied by an explanation or example of its intent. Where appropriate, a brief description of the empirical information and technical operations bearing upon it is presented.

A treatment of substantive comments on the proposed guidelines is then presented. Favorable and unfavorable comments on each proposed guideline are both presented, followed by a summary analysis of the comments. Each substantive objection to each guideline is addressed individually. General comments on the proposed guidelines are presented and addressed last.

## GUIDELINES

- [1] The Census shall be considered the most accurate count of the population of the United States, at the national, state, and local level, unless an adjusted count is shown to be more accurate. The criteria for accuracy shall follow accepted statistical practice and shall require the highest level of professional judgment from the Bureau of the Census. No statistical or inferential procedure may be used as a substitute for the Census. Such procedures may only be used as supplements to the Census.

Explanation: The mandate of the Census Bureau is to enumerate the population in a manner that assures that the count of the population is the best achievable given current methodology. As stated in the introduction, the assertion that a method involving statistical inference could lead to a more accurate enumeration warrants close scrutiny.

A set of adjusted counts would be based on a statistical inference that unaccounted for persons were present and that persons who were actually enumerated do not exist or were counted twice. Both determinations are based on a survey of a sample of similar blocks from locations across the country. Thus, the evidence, to be acceptable, must show convincingly that the count can be improved by statistical adjustment at national, state and local levels. In making this assessment, we will examine the effects of the proposed adjustment on the accuracy of counts at all geographic levels.

Comparison of estimates of population size. The estimates of the size of the population from the original enumeration, the demographic analysis, and the post-enumeration-survey estimates will be compared to assess their consistency. The comparison will take into consideration the uncertainty inherent in the

demographic analysis and post-enumeration-survey estimates. For the reasons explained in the introduction, the original enumerations will be considered to be more accurate for all geographic areas unless the evidence from demographic analysis and the post-enumeration survey demonstrates convincingly that the dual-system estimate is more accurate.

Accordingly, the Bureau of the Census shall carefully scrutinize and fully describe the size of any net undercount or net overcount inferred from demographic analyses of population sub-groups and the sources of any net undercount or net overcount of population subgroups inferred from the analysis of the post-enumeration survey.

#### **Discussion of Technical Grounds:**

Demographic Analysis. Estimates of the size of certain cohorts of the population are based on assumptions about or studies of the behavior of those populations. For some cohorts these assumptions have led to conclusions of net undercounts or net overcounts in several different censuses. The extent to which such conclusions result from specific assumptions will be described. Moreover, the extent to which these assumptions are warranted, and the sensitivity of such conclusions to changes in these assumptions, will be assessed. The potential sources of error in the demographic analyses the Bureau currently plans are:

- Birth registration completeness.
- Net immigration of undocumented aliens.
- White births, 1915-1935.
- Black births, 1915-1935.
- Foreign-born emigrants.
- Population over age 65.
- Models to translate historical birth-record racial classifications into 1990 self-reported census concepts.

The Bureau will examine the effect of errors in each of these measurements on estimates of the net overcount or net undercount. These studies will yield ranges of uncertainty for the demographic estimates of the population which will in turn yield ranges of uncertainty for the net overcount or net undercount. The effect of uncertainty in each of these components will be cumulated into overall levels of potential error.

Post-Enumeration Survey. The capture-recapture method lies at the heart of the post-enumeration-survey models for estimating population coverage deficiencies. The use of this methodology to derive the net undercount or net overcount estimates will be clearly explained. The appropriateness of this methodology to the enumeration of the population will be assessed.

Like demographic analysis, the post-enumeration-survey adjustment mechanism relies on numerous assumptions. The extent to which these assumptions are warranted, and the sensitivity of the conclusions to changes in these assumptions, will be assessed.

Survey methods are based on randomly chosen samples that use statistical inference to estimate the population of the Nation and its components. Such estimates are subject to statistical variation within some range of values --that is, a replication of the process used to make the estimate (including taking the sample) may not lead to the same estimate as the original procedures. Thus, there is a likely range of estimates around the "true" count of the population that depends on the random sample chosen.

If the range of estimates likely to occur is small and near the "truth," then any particular estimate is close to the truth and, thus, acceptable as an approximation of the "truth." If the range is very large, then any particular estimate may not be close to the "truth," and the estimation process gives us little information about the "truth."

A relevant technical criterion related to uncertainty introduced by sampling is how small any possible range of dual-system estimates must be to conclude that any particular outcome of the dual-system estimation process is more accurate than the enumeration itself.

Because the post-enumeration survey itself is a sample, the quantified parameters of the deficiencies are themselves estimates and subject to statistical variability. This variability must be small enough to ensure that any modification of the enumeration is an improvement over the unadjusted counts.

The post-enumeration survey serves two functions. The first function is to detect any deficiencies in the enumeration. For the post-enumeration survey to show convincingly that the enumeration is deficient, it must be clear that the deficiencies are not a result of problems in taking the post-enumeration survey. It follows, then, that the quality of the post-enumeration survey is a central concern in the decision whether to adjust.

The second function is to quantify any deficiencies attributed to the enumeration precisely enough to allow the enumeration to be modified in such a way that we are reasonably certain that the modified enumeration is more accurate than the original enumeration. Thus the post-enumeration survey must quantify the deficiencies of the enumeration precisely and accurately.

How much uncertainty in the measures of deficiency of the enumeration is acceptable?

- 1) If the likely range of measures of deficiency would include outcomes that would call for no modification in the enumeration, then no modification would be done.
- 2) The enumeration could be modified if the likely range of measures of deficiency would lead to potential modifications that would be substantially similar in terms of their impact on the counts of demographic groups, their impact on apportionment of Congress, and their impact on local population counts.

The quality of the net overcount or net undercount estimates that result from the post-enumeration survey depends on the quality of a series of operations used to gather and process the required data. The Bureau of the Census will undertake a series of studies to assess the statistical quality of the post-enumeration survey data. The results of these studies will yield measures of the precision and accuracy of the net overcount and net undercount estimates and a range of estimates for the net undercount and net overcount.

The current plans of the Bureau include investigation of the following sources of error for the dual system estimate of population size based on the post-enumeration survey and the census:

- Missing data
- Quality of the reported census day address
- Fabrication in the P sample
- Matching error
- Measurement of erroneous enumerations
- Balancing the estimates of gross overcount and gross undercount
- Correlation bias
- Random error

These and other component errors will be combined to produce an estimate of the overall level of error. In all evaluations, analyses will examine data for the population as a whole and for race, sex, Hispanic origin, and geographical detail.

- [2] The 1990 Census may be adjusted if the adjusted counts are consistent and complete across all jurisdictional levels: national, state, local, and census block. The resulting counts must be of sufficient quality and level of detail to be usable for Congressional reapportionment and legislative redistricting, and for all other purposes and at all levels for which census counts are published.

Explanation: This guideline acknowledges that the population counts must be usable for all purposes for which the Census Bureau publishes data. The guideline also reinforces the fact that there can be, for the population at all geographic levels at any one point in time, only one set of official government population figures.

Thus, the level of detail must be adequate to produce counts for all such purposes. If the 1990 Census count is to be adjusted, it must be adjusted down to the census block level. It must be arithmetically consistent to eliminate confusion, and to prevent any efforts to choose among alternative sets of numbers to suit a particular purpose.

If the Census is to be adjusted, a process called synthetic adjustment will be used. A synthetic adjustment assumes that the probability of being missed by the census is constant for each person within an age, race, Hispanic origin, sex, and tenure category in a geographical area. A synthetic adjustment is performed in two steps. First, the preferred adjustment factors are estimated for a variety of post strata defined by age, race, Hispanic origin, sex, and tenure within geographic areas. Then the adjusted estimate in each category for a census block is obtained by multiplying the unadjusted census estimate in that category by the adjustment factor. The adjusted census estimate for the census block is computed by adding the estimated adjustments for each post strata cell of the block. Put simply, in an adjusted population count each individual enumerated will receive a relative weight according to his or her race, age, sex, ethnic background, tenure, and place of residence. The aggregate counts will then be built up from the weighted individuals to census block, local area, state and national counts. We will conduct evaluations of small area estimations to ensure that this process results in counts that are in fact more accurate.

Evaluations of small area estimation. Coverage error may vary substantially within the post-enumeration-survey post-strata, although the post-strata were drawn to be homogeneous with respect to expected coverage error. The goal of this analysis is to determine whether or not the assumptions underlying a synthetic adjustment of the census are valid and produce counts which are more accurate at all geographic levels at which census data are used. In particular, the within-strata block-to-block variance in characteristics and net overcounts or net undercounts will be analyzed.

- [3] The 1990 census may be adjusted if the estimates generated from the pre-specified procedures that will lead to an adjustment decision are shown to be more accurate than the census enumeration. In particular, these estimates must be shown to be robust to variations in reasonable alternatives to the production procedures, and to variations in the statistical models used to generate the adjusted figures.

Explanation: The Bureau of the Census will determine the technical and operational procedures necessary for an adjustment decision before the results of the post-enumeration survey are known. This procedure shall be chosen to yield the most accurate adjusted counts that pre-census knowledge and judgment can provide. The Bureau of the Census will then assess the components of systematic and random error in the procedure and it will assess the robustness of the estimates generated from that procedure.

Various procedures and statistical models can be used to generate estimates of net overcounts or net undercounts and adjustment factors. This guideline specifies that a set of procedures for generating proposed adjusted counts will be determined in advance of receiving the 1990 post-enumeration-survey estimates. This guideline requires that these procedures be evaluated. These evaluations will identify other procedures and models that could be considered as reasonable alternatives to the chosen production process. These alternatives will be used to assess the accuracy and precision of the proposed adjusted counts. In addition they will be used to assess whether and by how much the adjusted counts could vary if alternative procedures were used.

- [4] The decision whether or not to adjust the 1990 census should take into account the effects such a decision might have on future census efforts.

Explanation: The Decennial Census is an integral part of our democratic process. Participation in the census must be encouraged. Respect for the objectivity, accuracy, and confidentiality of the census process must be maintained. Accordingly, if evidence suggests that adjustment would erode public confidence in the census or call into question the necessity of the population participating in future censuses, then that would weigh against adjustment. On the other hand, if evidence suggests that the failure to adjust would erode public confidence in the census and thus result in widespread disinclination to participate in future censuses, that would argue for adjustment. The extent to which adjustment or non-adjustment would be perceived as a politically motivated act, and thus would undermine the integrity of the census, should also be weighed in making any adjustment decision.

- [5] Any adjustment of the 1990 Census may not violate the United States Constitution or Federal statutes.

If an adjustment would violate Article I, Section 2, Clause 3 of the U.S. Constitution, as amended by Amendment 14, Section 2, or 13 U.S.C. Section 195, or any other Constitutional provision, statute or later enacted legislation, it cannot be carried out.

- [6] There will be a determination whether to adjust the 1990 census when sufficient data are available, and when analysis of the data is complete enough to make such a determination. If sufficient data and analysis of the data are not available in time to publish adjusted counts by July 15, 1991, a determination will be made not to adjust the 1990 census.

Explanation: It is inappropriate to decide to adjust without sufficient data and analysis. The Bureau will make every effort to ensure that such data are available and that their analysis is complete in time for the Secretary to decide to adjust and to publish adjusted data at the earliest practicable date and, in all events, not later than July 15, 1991, as agreed to in the stipulation. Note,

however, that the Department and the Bureau have consistently stated that this is the earliest possible date by which there is a 50 percent chance that an analysis could be completed on which a decision to adjust could be based. If, however, sufficient data and analysis of the data are not available in time, a determination will be made not to adjust the 1990 Census. The coverage evaluation research program will continue until all technical operations and evaluation studies are completed. Any decisions whether to adjust other data series will be made after completion of those operations.

- [7] **The decision whether or not to adjust the 1990 Census shall take into account the potential disruption of the process of the orderly transfer of political representation likely to be caused by either course of action.**

Explanation: This guideline is intended to ensure that the factor of disruption of the process of the orderly transfer of political representation is explicitly taken into account as the decision is reached. For example, many states have pointed to adjustment as being disruptive to their redistricting plans. Likewise, members of some communities that are believed to have been historically undercounted contend that if the Census were not adjusted, this would disrupt the orderly and proper transfer of political representation to their communities. The inability to ensure accuracy of counts at local levels may result in politically disruptive challenges by localities to official census counts.

This guideline recognizes that the Decennial Census plays a pivotal role in the orderly redistribution of political representation in our democratic republic. The process used to generate the required counts must not be arbitrary either in fact or appearance. The Secretary is thus obliged to consider the impact of his decision on the fairness and reasonableness of that redistribution to all those affected. This guideline requires an explicit statement of how and to what degree adjustment or non-adjustment would be disruptive. Even though these are concepts that are not easily quantifiable, they warrant serious consideration in order for the Secretary to make a prudent decision on an issue that profoundly affects public policy.

- [8] **The ability to articulate clearly the basis and implications of the decision whether or not to adjust shall be a factor in the decision. The general rationale for the decision will be clearly stated. The technical documentation lying behind the adjustment decision shall be in keeping with professional standards of the statistical community.**

Explanation: It is the responsibility of the government to have its critical decisions understood by its citizens. We recognize, however, that the degree to which a decision can be understood cannot alone dictate an important policy decision.

The decennial census is a public ceremony in which all usual residents of the United States are required to participate. If the census count were statistically

adjusted, the rationale for that action must be clearly stated and should be understandable to the general public. If the decision were made not to adjust, the elements of that decision must also be clearly stated in an understandable way. It will be the responsibility of the Department of Commerce and the Bureau of the Census to articulate the general rationale and implications of the decision in a way that is understandable to the general public.

This does not require the Bureau or the Department to explain in detail to the general public the complex statistical operations or inferences that could lead to a decision to adjust. But, as with any significant change in statistical policy, the government has the duty to explain to the public, in terms that most can understand, the reason for the change. If the decision is not to adjust, (that is not to change) the public will be informed as well.

The last part of the guideline ensures that the methods, assumptions, computer programs, and data used to prepare population estimates and adjustment factors will be fully documented. The documentation will be sufficiently complete for an independent reviewer to reproduce the estimates. These standards apply to the post-enumeration survey estimates, the demographic analysis estimates, and the small area synthetic estimates.



## APPENDIX F

### Subcommittee Testimony On Adjustment Before The Special Advisory Panel



PRESENTATION BY NEVADA ASSEMBLYWOMAN JAN EVANS

TESTIMONY ON THE CENSUS ADJUSTMENT ISSUE  
FOR THE SPECIAL ADVISORY PANEL TO THE  
UNITED STATES DEPARTMENT OF COMMERCE

June 28, 1990

Baltimore, Maryland

Reapportionment Task Force

National Conference of State Legislatures

MY NAME IS JAN EVANS, STATE ASSEMBLYWOMAN FROM DISTRICT 30 IN SPARKS, NEVADA. I AM SPEAKING TODAY AS CHAIRMAN AND ON BEHALF OF THE LEGISLATIVE COMMISSION'S SUBCOMMITTEE ON REAPPORTIONMENT OF THE NEVADA STATE LEGISLATURE.

THE SUBCOMMITTEE ON REAPPORTIONMENT WAS CREATED BY THE 1989 SESSION OF THE NEVADA LEGISLATURE WITH THE ADOPTION OF ASSEMBLY CONCURRENT RESOLUTION NO. 15 (FILE NO. 176, STATUTES OF NEVADA, 1989 AT PAGES 2354-2355). THIS MEASURE DIRECTED THE LEGISLATIVE COMMISSION TO STUDY THE REQUIREMENTS FOR REAPPORTIONMENT IN NEVADA IN CONJUNCTION WITH THE DATA FROM THE 1990 DECENNIAL CENSUS. THE SUBCOMMITTEE IS A BIPARTISAN, JOINT BODY CONSISTING OF EIGHT LEGISLATIVE MEMBERS WHO REPRESENT THE MAJOR RURAL AND URBAN AREAS OF THE STATE.

AT ITS MEETING ON JUNE 18, 1990, IN LAS VEGAS, NEVADA, THE SUBCOMMITTEE ON REAPPORTIONMENT REVIEWED THE STATUS OF THE ADJUSTMENT ISSUE AND APPROVED THE FOLLOWING REMARKS FOR PRESENTATION TO THE SPECIAL ADVISORY PANEL OF THE UNITED STATES DEPARTMENT OF COMMERCE.

A PRIMARY CONCERN OF THE NEVADA LEGISLATURE WITH THE ADJUSTMENT ISSUE RELATES TO THE JULY 15, 1991, DEADLINE AND THE PROBABILITY THAT ADJUSTED COUNTS WOULD REQUIRE THE LEGISLATURE TO MEET IN SPECIAL SESSION TO MODIFY ITS REDISTRICTING PLANS AT SIGNIFICANT EXPENSE TO THE STATE'S GOVERNMENT AND ITS CITIZENS.

THE NEVADA LEGISLATURE MEETS IN BIENNIAL SESSION IN EVERY ODD-NUMBERED YEAR. ARTICLE 4, SECTION 5, OF THE NEVADA CONSTITUTION REQUIRES THE LEGISLATURE TO APPORTION ITSELF AT ITS FIRST SESSION AFTER THE TAKING OF THE DECENNIAL CENSUS. THE NEVADA LEGISLATURE WILL CONVENE ON JANUARY 21, 1991. NO SET DEADLINE IS ESTABLISHED FOR ADJOURNMENT, BUT THE LEGISLATURE IN RECENT TIMES TYPICALLY HAS CONCLUDED ITS BUSINESS IN JUNE OF SESSION YEARS. THE LONGEST SESSION IN THE STATE'S HISTORY OCCURRED IN 1989 WHEN IT LASTED FOR 167 CALENDAR DAYS AND ADJOURNED ON JULY 1.

NEVADA HAS A STRONG ATTACHMENT TO THE TRADITION OF MAINTAINING A CITIZEN LEGISLATURE COMPOSED OF REPRESENTATIVES FROM A WIDE

VARIETY OF OCCUPATIONS WHO GENERALLY SACRIFICE THEIR JOBS AND INCOME FOR ALMOST 6 MONTHS EVERY 2 YEARS TO CONDUCT THE BUSINESS OF THE STATE. STEPS HAVE BEEN TAKEN IN RECENT YEARS TO HELP LIMIT THE LENGTH OF LEGISLATIVE SESSIONS AND IMPROVE THE EFFICIENCY OF THE LEGISLATIVE PROCESS.

THE NEVADA LEGISLATURE IS CONCERNED THAT THE REDISTRICTING TASK NOT UNNECESSARILY EXTEND THE LENGTH OF THE 1991 SESSION OR CAUSE THE NEED FOR A SPECIAL SESSION. IF THE CENSUS REDISTRICTING DATA IS RECEIVED ON OR BEFORE APRIL 1, 1991, AS REQUIRED, THE LEGISLATURE WILL HAVE A LITTLE MORE THAN 2 MONTHS TO ACCOMPLISH ITS TASK IN TIME FOR REASONABLE ADJOURNMENT IN JUNE 1991. THE NEVADA LEGISLATURE IS INVESTING ALMOST \$450,000 AND CONSIDERABLE STAFF TIME IN NEW COMPUTER EQUIPMENT AND A GEOGRAPHIC INFORMATION SYSTEM AND DATABASE TO ENSURE THAT ITS REDISTRICTING TASK CAN BE COMPLETED IN A TIMELY AND EFFICIENT MANNER UNDER THE NEW TIGER SYSTEM ENVIRONMENT.

IF A DECISION IS MADE TO ADJUST THE 1990 CENSUS AND THE ADJUSTED DATA IS NOT PROVIDED TO THE STATES UNTIL JULY 15, 1991, THE NEVADA LEGISLATURE MOST LIKELY WILL BE ADJOURNED WITH ITS REDISTRICTING PLANS ALREADY COMPLETED. THE LEGISLATURE'S EXPENSE AND EFFORTS IN PREPARATION FOR REDISTRICTING COULD BE LARGELY NEGATED, AND THE STATE'S TAXPAYERS COULD BE REQUIRED TO ASSUME THE ADDITIONAL BURDEN OF THE COST OF A SPECIAL SESSION IF

MODIFICATION OF THE REDISTRICTING PLANS BECOMES NECESSARY IN CONJUNCTION WITH THE ADJUSTED DATA.

THE NEVADA LEGISLATURE'S SUBCOMMITTEE ON REAPPORTIONMENT CONTENDS THAT THESE EXPENSES, AND THE FURTHER CONTROVERSY THAT WOULD RESULT FROM AN ADJUSTMENT, MUST BE CLEARLY AND EASILY JUSTIFIABLE TO AVOID A LOSS OF FAITH BY THE PUBLIC IN THE PROCESS OF ALLOCATING POLITICAL REPRESENTATION. IF THE CENSUS IS TO BE ADJUSTED FOR THE FIRST TIME IN THE NATION'S HISTORY, IT MUST BE THOROUGHLY JUSTIFIED AND IRREFUTABLY PROVEN TO BE MORE ACCURATE AND USEFUL--PARTICULARLY DOWN TO THE CENSUS BLOCK LEVEL WHICH WILL BE USED FOR REDISTRICTING IN NEVADA AND MANY OTHER STATES.

NEVADA'S REAPPORTIONMENT SUBCOMMITTEE STRONGLY URGES THE SPECIAL ADVISORY PANEL TO TAKE INTO ACCOUNT THIS CRITERIA, THE HISTORICAL PRECEDENT AND THE FINANCIAL AND POLITICAL IMPACTS ON STATE LEGISLATURES IN NEVADA AND THROUGHOUT THE COUNTRY AS THE PANEL DELIBERATES ON ITS ADVICE TO THE SECRETARY OF THE DEPARTMENT OF COMMERCE ON WHETHER TO ADJUST THE RESULTS OF THE 1990 CENSUS.

THANK YOU FOR THIS OPPORTUNITY TO ADDRESS THE SPECIAL ADVISORY PANEL AND TO SHARE THE NEVADA LEGISLATURE'S CONCERNS ABOUT THE CENSUS ADJUSTMENT ISSUE.

## APPENDIX G

### Subcommittee And Governor's Letters On Postcensus Local Review Program



STATE OF NEVADA  
LEGISLATIVE COUNSEL BUREAU

LEGISLATIVE BUILDING  
CAPITOL COMPLEX  
CARSON CITY, NEVADA 89710  
Fax No.: (702) 687-5962

LEGISLATIVE COMMISSION (702) 687-6800  
JOHN E. JEFFREY, *Assemblyman, Chairman*  
John R. Crossley, *Director, Secretary*

INTERIM FINANCE COMMITTEE (702) 687-6821  
WILLIAM J. RAGGIO, *Senator, Chairman*  
Daniel G. Miles, *Fiscal Analyst*  
Mark W. Stevens, *Fiscal Analyst*



JOHN R. CROSSLEY, *Director*  
(702) 687-6800

Wm. GARY CREWS, *Legislative Auditor* (702) 687-6815  
ROBERT E. ERICKSON, *Research Director* (702) 687-6825  
LORNE J. MALKIEWICH, *Legislative Counsel* (702) 687-6830

July 23, 1990

(TO: LOCAL HEO'S AND LIAISONS)

<NAME>  
<TITLE>  
<AGENCY>  
<ADDRESS>  
<CITY>, <STATE> <ZIP>

Dear <DEAR>:

This letter is written on behalf of the Legislative Commission's Subcommittee on Reapportionment (A.C.R. 15) to strongly encourage your active participation in the Postcensus Local Review Program conducted by the United States Bureau of the Census.

The Subcommittee on Reapportionment was created by the 1989 session of the Nevada Legislature and directed to study the requirements and preparations for reapportionment in Nevada in conjunction with the data from the 1990 census. The Subcommittee is a bipartisan, joint body consisting of eight legislative members who represent the major rural and urban areas of the state.

The Subcommittee recognized early in the process that the first step toward a successful reapportionment by the 1991 Legislature is to ensure that a complete census count is obtained in the state. A complete and accurate count of all Nevadans in 1990 is critical not only for legislative redistricting, but also to effectively monitor the state's rapid growth and to ensure that Nevada receives its fair share of entitlements from population-based programs administered by the Federal Government.

At its meeting in Las Vegas on June 18, 1990, the Subcommittee reviewed the status of the 1990 census and discussed the Census Bureau's Local Review Program. The Subcommittee then voted unanimously to communicate with local government officials to emphasize the importance of participating in the Postcensus Local Review Program.

The Postcensus Local Review Program was developed by the Census Bureau to provide local and tribal governments with an opportunity to improve the accuracy and completeness of the

census. While the program is voluntary, it is clearly in the best interests of your local government and citizens to participate. This program provides the only opportunity you will have to review preliminary census counts and to identify potential problems in housing unit counts at the census block level. The Census Bureau will investigate locally reported problems and make corrections as needed.

We understand that most local governments have limited personnel, time and resources for this type of special program. However, a concentrated and conscientious effort on Postcensus Local Review will reap benefits through an improved census count for your local government and the state that will be used throughout the next decade.

As the highest elected official and/or liaison person for your local government, you serve a critical role in the 1990 census process in your area. The Subcommittee on Reapportionment strongly encourages you to prepare early, actively participate and carefully review the postcensus local review counts to help improve the accuracy and completeness of the 1990 census in Nevada.

Thank you for your attention and consideration of this matter.

With best regards,

Jan Evans, Assemblywoman  
Chairman, Legislative  
Commission's Subcommittee  
on Reapportionment (ACR 15)

JE/sa:REAP,M15

cc: Governor Robert J. Miller  
Nevada Congressional Delegation  
Legislative Leadership  
Robert S. Hadfield, Nevada Association of Counties  
G. P. Etcheverry, Nevada League of Cities



STATE OF NEVADA  
EXECUTIVE CHAMBER  
Carson City, Nevada 89710

BOB MILLER  
Governor

TELEPHONE  
(702) 687-5670  
Fax: (702) 687-4486

July 26, 1990

(TO: LOCAL HEO'S AND LIAISONS)

<NAME>  
<TITLE>  
<AGENCY>  
<ADDRESS>  
<CITY>, <STATE> <ZIP>

Dear <DEAR>:

I am writing to lend my strong support and encouragement to your participation in the Postcensus Local Review Program conducted by the United States Bureau of the Census.

Through extensive followup procedures, the Census Bureau has made a determined effort to count all Nevada residents. The Postcensus Local Review Program offers a special opportunity for local and tribal governments in Nevada to improve the completeness and accuracy of the census in our state.

The Local Review Program provides a direct opportunity for local governments to influence the final census results. It ensures that all housing units are counted, and it will help shape the political representation of our state and the distribution of federal funds to Nevada over the next decade.

According to the Seattle Regional Office of the Census Bureau, your local government already should have received the postcensus local review maps for use in preparing estimates by block. At the present time, you should have completed, or be in the process of developing, local estimates for housing units and group quarters population for the blocks shown on the maps. Between August 24 and August 31, 1990, the Census Bureau will ship to you the preliminary housing unit and population counts by block. You then will have 15 working days (excluding Sundays but including

Page 2

Saturdays) to compare these counts with your local estimates and document problems to the Census Bureau.

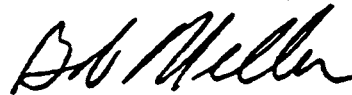
The timeframes for the Postcensus Local Review Program are short, but the benefits of a complete and accurate census count are long-term. If you have any questions about the program, please do not hesitate to contact the following state liaison persons:

Betty McNeal  
State Data Center Librarian  
Nevada State Library  
Capitol Complex  
401 North Carson Street  
Carson City, NV 89710  
Telephone: 887-2612

Maud Naroll  
Nevada State Demographer  
Bureau of Business and Economic  
Research  
College of Business Administration  
University of Nevada, Reno  
Reno, NV 89557  
Telephone: 784-4820

As the highest elected official and/or liaison for the Postcensus Local Review Program in your area, you have an important role in the accurate completion of the 1990 census. I offer my support and encouragement for your participation in this program, and I thank you sincerely for your efforts.

With best regards,



BOB MILLER  
Governor

RJM/sa:REAP,M16

cc: Nevada Congressional Delegation

Legislative Leadership

Robert S. Hadfield, Nevada Association of Counties

G. P. Etcheverry, Nevada League of Cities

## APPENDIX H

### Preliminary Census Counts And Analysis



STATE OF NEVADA  
LEGISLATIVE COUNSEL BUREAU

LEGISLATIVE BUILDING  
CAPITOL COMPLEX  
CARSON CITY, NEVADA 89710  
Fax No.: (702) 687-5962

LEGISLATIVE COMMISSION (702) 687-6800  
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John R. Crossley, *Director, Secretary*

INTERIM FINANCE COMMITTEE (702) 687-6821  
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Mark W. Stevens, *Fiscal Analyst*



JOHN R. CROSSLEY, *Director*  
(702) 687-6800

Wm. GARY CREWS, *Legislative Auditor* (702) 687-6815  
ROBERT E. ERICKSON, *Research Director* (702) 687-6825  
LORNE J. MALKIEWICH, *Legislative Counsel* (702) 687-6830

August 29, 1990

MEMORANDUM

TO: Chairman and Members, Legislative Commission's  
Subcommittee on Reapportionment (A.C.R. 15)

FROM: Brian L. Davie, Principal Research Analyst *BLD*

SUBJECT: 1990 Preliminary Census Counts

This memorandum furnishes a copy of the 1990 preliminary census counts and provides certain comparisons and statistics relating to population and redistricting in Nevada based on these numbers.

Preliminary Counts

Attached is a copy of the 1990 preliminary census counts for Nevada from the Postcensus Local Review Program provided by the United States Bureau of the Census. This document includes preliminary population counts for the state, counties, incorporated cities and Indian reservations and colonies.

It also includes a list of conditions which emphasize the partial and preliminary nature of these population counts. The population totals for the state and its subdivisions likely will change by an undetermined number as the Census Bureau completes the Postcensus Local Review Program and other activities to improve the coverage of the 1990 census.

A map of the state also is attached which displays the 1990 preliminary census counts by county and city. This map was produced by Kathy Steinle, Legislative Programmer, Data Processing, Legislative Counsel Bureau, on the Nevada Legislature's geographic information system.

### Population Count Comparisons

Table 1 (attached) furnishes a comparison of Nevada population counts and estimates. It includes the 1980 census results, the 1990 preliminary counts, the percentage change for the decade, the 1990 state forecast (counties only) and the official 1989 state estimate by city, county and region in the state.

The table indicates that, as expected, the 1990 preliminary census counts are substantially below the state's 1990 forecast. However, in most cases, the census counts are close to the 1989 official state estimates. As noted previously, the preliminary census counts likely will change, and increase to some extent, as the Census Bureau completes its activities and programs to improve the accuracy and coverage of the 1990 census.

### Allocation of Legislative Seats

Table 2 (attached) furnishes statistics on the number of legislative seats in the Nevada Legislature by regions based on the 1990 preliminary census counts. Allocations of seats are shown for various configurations from the current 63-member legislature up to the maximum constitutional limit of 75 members.

This data verifies previous projections that the Washoe/Carson area, under the current configuration of the Legislature, will lose control of two Assembly districts and one Senate district to be gained by the Clark County area, while the rural area of the state will essentially retain its present number of seats.

### Congressional Districts

Table 3 (attached) shows the status of Nevada's congressional districts based on the 1990 preliminary census counts. This table also verifies previous projections that the number and percentage of Clark County population in Congressional District 2 will increase significantly under the current configuration of the congressional districts.


Please let me know if you need any further information.

BLD/sa:REAP,M18  
Encs.



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Bureau of the Census**  
Washington, D.C. 20233  
**OFFICE OF THE DIRECTOR**

**AUG 24 1990**

**From:** Marshall L. Turner, Jr.   
Chief, 1990 Census Redistricting  
Data Office

**Subject:** Transmittal of 1990 Census Postcensus  
Local Review Counts

We are attaching printed copies of the Postcensus Local Review counts for governmental units in your state. Your receipt and use of these preliminary and partial figures is subject to the Statement of Understanding that you returned. Attached is a restatement of those terms.

**Attachment**



UNITED STATES DEPARTMENT OF COMMERCE  
Bureau of the Census  
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

## RECEIPT AND USE OF POSTCENSUS LOCAL REVIEW DATA

Per your request, we are providing you data generated for the Postcensus Local Review Program. You have previously accepted receipt of these data under the following conditions.

1. You understand that the Census Bureau generated these data solely for use in the coverage improvement operation called the Postcensus Local Review Program.
2. You understand that data from the Postcensus Local Review Program represent partial and preliminary results from the 1990 decennial census and are likely to change pending completion of the Postcensus Local Review Program and other census enumeration and coverage improvement activities.
3. You understand that these partial and preliminary data from the Postcensus Local Review Program may differ by an unpredictable amount from the final and official 1990 decennial census data and apportionment counts issued to the President by December 31, 1990, and the P.L. 94-171 redistricting data to be issued by April 1, 1991.
4. You understand that the Census Bureau is releasing these partial and preliminary data from the Postcensus Local Review Program for information purposes only. The Census Bureau neither encourages nor sanctions use for official purposes, such as budgeting or redistricting activities.
5. You understand that since the Postcensus Local Review data are preliminary in nature, that it is premature to raise questions about the content of the data. Therefore, it is inappropriate to request the Census Bureau to respond to such inquiries or to speculate on the final census results.

STATE: NEVADA

PAGE: 1

DATE: 08-16-90

1990 DECENNIAL CENSUS  
PRELIMINARY POPULATION COUNTSU.S. DEPARTMENT OF COMMERCE  
BUREAU OF THE CENSUS

## GOVERNMENTAL UNIT

CODE	NAME	ALL PERSONS	PERSONS IN GROUP QTRS
ST 32	NEVADA	1193285	24691
CO 32 001	Churchill County	17792	455
CO 32 003	Clark County	735892	12460
CO 32 005	Douglas County	27581	226
CO 32 007	Elko County	33063	606
CO 32 009	Esmeralda County	1343	5
CO 32 011	Eureka County	1538	12
CO 32 013	Humboldt County	12657	311
CO 32 015	Lander County	6243	32
CO 32 017	Lincoln County	3762	287
CO 32 019	Lyon County	19967	168
CO 32 021	Mineral County	6465	140
CO 32 023	Nye County	17722	1139
CO 32 027	Pershing County	4326	56
CO 32 029	Storey County	2518	71
CO 32 031	Washoe County	252725	5446
CO 32 033	White Pine County	9251	727
PL 32 0010	Boulder City city	12309	307
PL 32 0015	Caliente city	1116	142
PL 32 0020	Carlin city	2205	138
PL 32 0025	Carson City	40192	2550
PL 32 0035	Elko city	12586	138
PL 32 0040	Ely city	4751	105
PL 32 0045	Fallon city	6321	167
PL 32 0050	Gabbs city	667	0
PL 32 0060	Henderson city	60408	627
PL 32 0065	Las Vegas city	256900	4735
PL 32 0070	Lovelock city	1959	41
PL 32 0076	Mesquite city	1579	23
PL 32 0080	North Las Vegas city	47176	592
PL 32 0090	Reno city	130221	4765
PL 32 0100	Sparks city	53058	649
PL 32 0120	Wells city	1247	1
PL 32 0130	Winnemucca city	6044	153
PL 32 0135	Yerington city	2360	50
IR 32 0510	Carson Colony	248	0
IR 32 0940	Dresslerville Colony	151	0
IR 32 0965	Duck Valley Reservation	902	9
IR 32 0975	Duckwater Reservation	135	0
IR 32 1040	Ely Colony	59	0
IR 32 1070	Fallon Colony	80	0
IR 32 1075	Fallon Reservation	373	0
IR 32 1210	Fort McDermitt Reservation	393	0
IR 32 1235	Fort Mojave Reservation	0	0
IR 32 1340	Goshute Reservation	23	0
IR 32 1915	Las Vegas Colony	80	0
IR 32 2015	Lovelock Colony	93	0
IR 32 2315	Moapa River Reservation	383	0
IR 32 3010	Pyramid Lake Reservation	1388	14
IR 32 3130	Reno-Sparks Colony	249	0

STATE: NEVADA  
PAGE: 2 DATE: 08-16-90

1990 DECENNIAL CENSUS  
PRELIMINARY POPULATION COUNTS

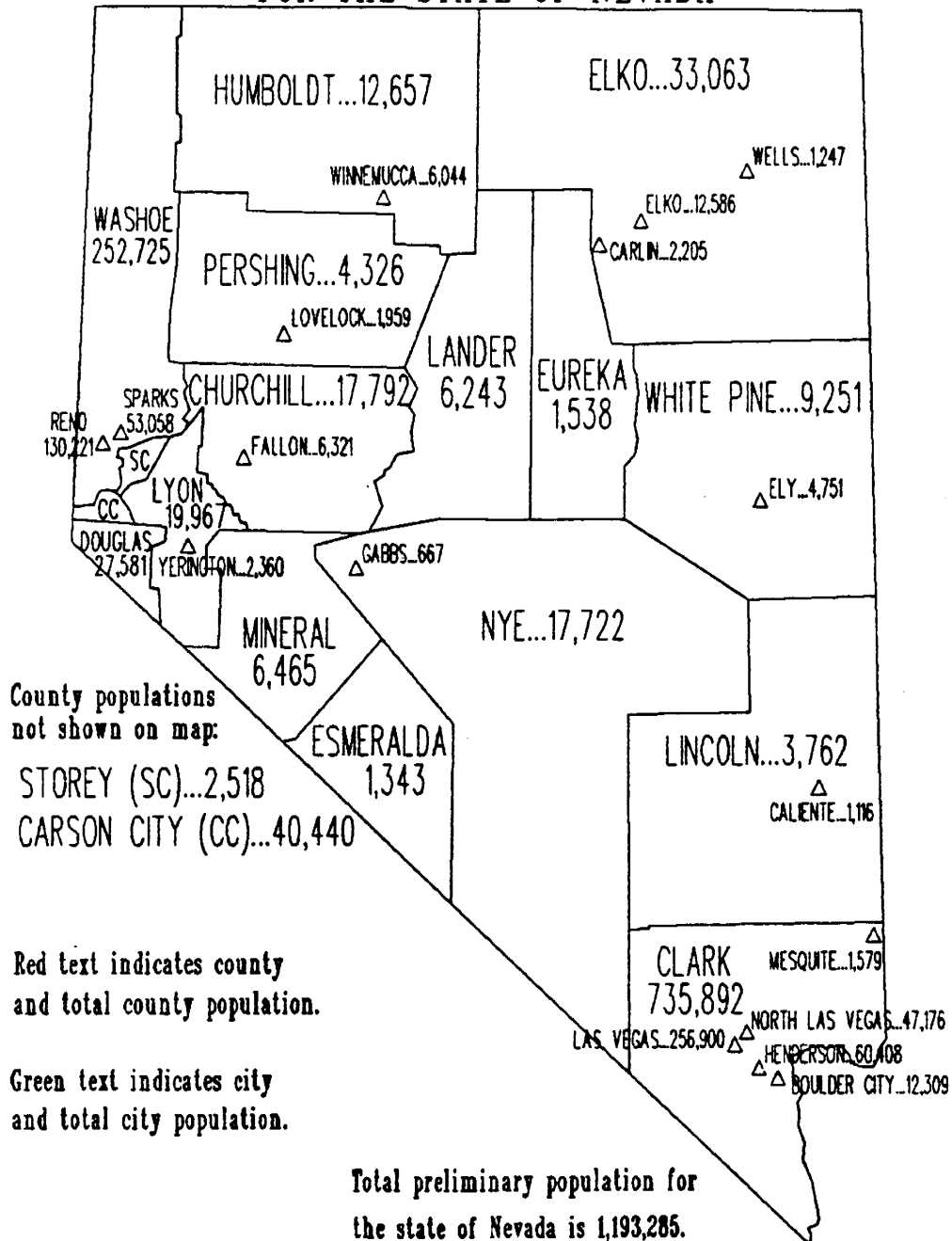
U.S. DEPARTMENT OF COMMERCE  
BUREAU OF THE CENSUS

GOVERNMENTAL UNIT

CODE	NAME	ALL PERSONS	PERSONS IN GROUP QTRS
IR 32 4045	Summit Lake Reservation	7	0
IR 32 4155	Te-Moak Reservation	145	0
IR 32 4515	Walker River Reservation	798	94
IR 32 4560	Washoe Reservation	157	12
IR 32 4635	Winnemucca Colony	160	0
IR 32 4725	Yerington Reservation	275	60
IR 32 4740	Yomba Reservation	95	0
TL 32 4155	Te-Moak Trust Lands	741	0
TL 32 4725	Yerington Trust Lands	153	0

\*\*\*\* END OF REPORT \*\*\*\*

# 1990 DECENNIAL CENSUS PRELIMINARY POPULATION COUNTS FOR THE STATE OF NEVADA



ELS 4/90

TABLE 1  
COMPARISON OF NEVADA POPULATION COUNTS AND ESTIMATES

	1980 Census <sup>1</sup>	1990 Preliminary Census Counts <sup>2</sup>	Percent Change 1980-1990	1990 State Forecast <sup>3</sup>	1989 State Estimate <sup>4</sup>
Carson City	32,022	40,440	26.3	41,330	39,420
Churchill County	13,917	17,792	27.8	20,490	19,460
Fallon	4,262	6,321	48.3		6,570
Clark County	463,087	735,892	58.9	794,140	733,180
Boulder City	9,590	12,309	28.4		13,210
Henderson	24,363	60,408	147.9		67,150
Las Vegas	164,674	256,900	56.0		262,600
N. Las Vegas	42,739	47,176	10.4		52,420
Mesquite	914	1,579	72.8		1,940
Douglas County	19,421	27,581	42.0	32,080	30,410
Elko County	17,269	33,063	91.5	36,560	33,270
Carlin	1,232	2,205	79.0		2,750
Elko	8,758	12,586	43.7		16,700
Wells	1,218	1,247	2.4		1,400
Esmeralda County	777	1,343	72.8	1,260	1,240
Eureka County	1,198	1,538	28.4	2,310	2,280
Humboldt County	9,449	12,657	34.0	15,340	14,240
Winnemucca	4,140	6,044	46.0		6,640
Lander County	4,076	6,243	53.2	6,580	6,190
Lincoln County	3,732	3,762	0.8	4,500	4,330
Caliente	982	1,116	13.6		1,160
Lyon County	13,594	19,967	46.9	23,030	21,750
Yerington	2,021	2,360	16.8		2,560
Mineral County	6,217	6,465	4.0	7,590	7,440
Nye County	9,048	17,722	95.9	19,990	17,980
Gabbs	811	667	-17.8		780
Pershing County	3,408	4,326	26.9	5,150	4,820
Lovelock	1,680	1,959	16.6		2,310
Storey County	1,503	2,518	67.5	2,670	2,480
Washoe County	193,623	252,725	30.5	257,660	251,130
Reno	100,756	130,221	29.2		127,190
Sparks	40,780	53,058	30.1		55,460
White Pine County	8,167	9,251	13.3	9,700	8,830
Ely	4,882	4,751	- 2.7		5,190
State	800,508	1,193,285	49.1	1,280,380	1,198,450
Regions:					
Clark County	463,087	735,892	58.9	794,140	733,180
Washoe/Carson	225,645	293,165	29.9	298,990	290,550
Rural	111,776	164,228	46.9	187,250	174,720

Sources:

<sup>1</sup>1980 census counts from United States Bureau of the Census.

<sup>2</sup>1990 preliminary population counts from the U.S. Census Bureau's Postcensus local review program.

<sup>3</sup>State preliminary population forecasts from the Department of Administration and State Demographer.

<sup>4</sup>Official state estimates as of July 1, 1989, from the Department of Taxation.

TABLE 2

**NUMBER OF LEGISLATIVE SEATS IN NEVADA BY REGIONS  
BASED ON THE 1990 PRELIMINARY CENSUS COUNTS**

63-Member Legislature (42 Assemblymen and 21 Senators)

Ideal Districts - 28,412 Assembly; 56,823 Senate

<u>Regions</u>	<u>Number of Assembly Seats</u>	<u>Number of Senate Seats</u>
Clark	25.9	13.0
Washoe/Carson	10.3	5.2
Rural	5.8	2.9

66-Member Legislature (44 Assemblymen and 22 Senators)

Ideal Districts - 27,120 Assembly; 54,240 Senate

<u>Regions</u>	<u>Number of Assembly Seats</u>	<u>Number of Senate Seats</u>
Clark	27.1	13.6
Washoe/Carson	10.8	5.4
Rural	6.1	3.0

69-Member Legislature (46 Assemblymen and 23 Senators)

Ideal Districts - 25,941 Assembly; 51,882 Senate

<u>Regions</u>	<u>Number of Assembly Seats</u>	<u>Number of Senate Seats</u>
Clark	28.4	14.2
Washoe/Carson	11.3	5.6
Rural	6.3	3.2

72-Member Legislature (48 Assemblymen and 24 Senators)

Ideal Districts - 24,860 Assembly; 49,720 Senate

<u>Regions</u>	<u>Number of Assembly Seats</u>	<u>Number of Senate Seats</u>
Clark	29.6	14.8
Washoe/Carson	11.8	5.9
Rural	6.6	3.3

75-Member Legislature (50 Assemblymen and 25 Senators)

Ideal Districts - 23,866 Assembly; 47,731 Senate

<u>Regions</u>	<u>Number of Assembly Seats</u>	<u>Number of Senate Seats</u>
Clark	30.8	15.4
Washoe/Carson	12.3	6.1
Rural	6.9	3.4

Note: The 1990 preliminary census counts used in these calculations are as follows:

State total	1,193,285
Clark County	735,892
Washoe/Carson	293,165
Rural Counties	164,228

TABLE 3

STATUS OF CONGRESSIONAL DISTRICTS IN NEVADA  
BASED ON 1990 PRELIMINARY CENSUS COUNTS

	<u>Ideal District Population</u>	<u>Number of Clark County Population In Congressional District 2</u>	<u>Percent of District 2 Population from Clark County</u>
1980	400,246	62,451	15.6
1990	596,642	139,250*	23.3*

\*Assumes that the current configuration of Nevada's congressional districts remains essentially the same and that Congressional District 1 has the ideal population.

REAP,T3

## APPENDIX I

### Statistical Terminology For Redistricting



# STATISTICAL TERMINOLOGY FOR DISTRICTING

IDEAL DISTRICT POPULATION	=	$\frac{\text{State Population}}{\text{Number of Districts}}$
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## INDIVIDUAL DISTRICTS

ABSOLUTE DEVIATION	=	$\text{District Population} - \text{Ideal Population}$
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RELATIVE DEVIATION	=	$\frac{\text{Absolute Deviation}}{\text{Ideal Population}}$
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## ALL DISTRICTS

ABSOLUTE RANGE	=	$\text{Largest Positive Absolute Deviation} \\ \text{and the} \\ \text{Largest Negative Absolute Deviation}$
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RELATIVE RANGE	=	$\text{Largest Positive Relative Deviation} \\ \text{and the} \\ \text{Largest Negative Relative Deviation}$
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OVERALL RANGE*	=	$\text{Largest Positive Deviation} + \text{Largest} \\ \text{Negative Deviation} \\ (\text{Ignoring '+' or '-' Signs})$
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RATIO RANGE	=	$\frac{\text{Largest District Population}}{\text{Smallest District Population}}$
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ABSOLUTE MEAN DEVIATION	=	$\frac{\text{Sum of All Absolute Deviations}}{\text{Number of Districts}} \\ (\text{Ignoring '+' or '-' Signs})$
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RELATIVE MEAN DEVIATION	=	$\frac{\text{Sum of All Relative Deviations}}{\text{Number of Districts}} \\ (\text{Ignoring '+' or '-' Signs})$
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STANDARD DEVIATION	=	$\text{The Square Root of:} \\ \frac{\text{The Sum of the Squares of All Deviations}}{\text{Number of Districts}} \\ (\text{Ignoring '+' or '-' Signs})$
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EXPRESSED ALGEBRAICALLY:

$$\sqrt{\frac{\sum \text{Deviations}^2}{\text{Number of Districts}}}$$

\*Can Be 'Absolute' or 'Relative'