

MEMORANDUM  
LEGISLATIVE REDISTRICTING  
1981 Session

Phil Burks  
Gary L. Kaufman  
LEGISLATIVE SERVICE BUREAU

This memorandum explains the Legislative Service Bureau's role and responsibilities under House File 707, passed by the 1980 Session of the General Assembly, the organization and functions of the Temporary Redistricting Advisory Commission which will be set up under that legislation, and concludes with some general comments about the redrawing of legislative district boundaries.

CONSTITUTIONAL REQUIREMENTS

There are at present in Iowa law two sources of legal requirements and constraints regarding redistricting. One is Article III, Sections 6, 34, 35, 36, 37 and 39 of the Iowa Constitution as amended in 1968 and 1970. These provisions are fairly general and simple; they limit the size of the Senate to 50 and that of the House to 100 members, require that each member of each house be elected from a single district drawn "on the basis of population", and require that congressional districts--but not legislative districts--follow county lines. Each district must be compact and contiguous. The state Constitution made the Legislature primarily responsible for redistricting, but requires that it complete the job by September 1, 1981 or else default the responsibility to the Iowa Supreme Court. There are provisions which permit any aggrieved citizen to challenge a redistricting plan passed by the Legislature and the state Supreme Court has original jurisdiction for such challenges.

HOUSE FILE 707

Redistricting Preparation. House File 707, which can also be cited as chapter 1021 of the Acts of the 1980 Session of the General Assembly, provides much more stringent requirements for redistricting. The responsibilities of the Legislative Service Bureau under House File 707 include both the necessary preparations for drawing of redistricting plans, and the actual drawing and submission of one or more redistricting plans for consideration and action by the Legislature. In drawing those plans, the Service Bureau is to be guided by the criteria set forth in House File 707, but not directly by any policy-making body either from within or outside of the Legislature. That is a very weighty responsibility for a nonpartisan staff agency, and one the Bureau takes seriously.

The Service Bureau expects to again use a set of computer programs, known as the Iowa Redistricting System, which has been

developed and refined over a period of years by Professor John M. Liittschwager of the University of Iowa College of Engineering and various colleagues. The staff at the Service Bureau have worked with those programs to help ensure that they will be ready for use next year. One major logistical advantage is that the Bureau is now able to run these programs on the Data Processing Division's computer equipment in Des Moines. In 1971 and 1972, these programs could be used only at the University of Iowa Computer Center, and the Bureau's staff put in considerable valuable time on the road between Des Moines and Iowa City.

One of the Bureau's first major tasks has been updating the data base for redistricting to reflect the geographic and political units for which the Census Bureau will report official 1980 population figures. These units are generally referred to as "building blocks" for legislative districts.

In the less populous counties, the major building block is the civil township, which in nearly every case is also a precinct. The names, locations, and lists of adjoining townships or other building blocks were completed in preparation for the redistricting work that followed the 1970 census. We do not anticipate a great deal of change in this part of the data base, but of course it has had to be thoroughly checked against 1980 Census Bureau materials.

As many of you know, in past censuses the Census Bureau paid no attention to election precincts as such. The state has always received township information because the Census Bureau considers townships minor political subdivisions. Within cities, however, population breakdowns were only available by the Census Bureau's own unit, usually called enumeration districts. By the time of the 1972 redistricting work for the Iowa Supreme Court, it was possible to derive the precinct population for the larger cities by adding up the city block population for each precinct. However, that is a long and tedious job.

In 1980, for the first time, the Census Bureau has recognized the boundaries of election precincts in those areas where the state certified the precinct boundaries to the Bureau by a 1977 deadline. In Iowa, the Service Bureau certified the boundaries of precincts in most cities of over 25,000 population, according to the 1970 census, and the Bureau also included the precinct boundaries for the balance of each county in which such a city is located.

The availability of these precinct population figures for cities will be of great assistance to the Bureau, however there remain a couple of problem areas that we will have to work around. One is that the Census Bureau requires that all of the boundaries it uses for population units follow visible physical features, except where political subdivision boundaries are followed--that is, county lines, city limits, township boundaries, etc. Unfortunately, the Census Bureau does not consider precinct lines to be political subdivision boundaries. Therefore, in a few instances where cities have drawn precinct boundaries along surveyor section lines or imaginary extensions of streets or other nonvisible features, the Bureau has had to agree to alter the actual precinct boundaries to

the extent necessary to follow visible physical features. There are not too many of these cases, and some of the alterations are relatively minor. Nevertheless, the fact remains that in those particular cases the population figures we get back will not actually represent the precinct lines that are specified in the city ordinances.

Also there are a couple of instances in which the boundaries of so many city precinct boundaries did not follow visible features that it became impractical to attempt to certify any of their precincts to the Census Bureau. Specifically, this occurred in Fort Dodge and in Ottumwa. Because the Census Bureau has considerably expanded its city block census program this year, the Bureau will receive city block population figures for each of these cities. We will have to try to use these figures to aggregate some kind of building blocks to use in place of precincts.

Once the geographic portion of the data base for the 1981 redistricting is set, we will have to wait for official 1980 census population data in order to complete the data base. However, in the meantime the Bureau has begun work on preparation of maps which are suitable for illustrating the boundaries of the new legislative districts when plans are being drawn next year.

Redistricting Standards. Of course, all of what has been described so far has been preparatory to the Service Bureau's main responsibility under House File 707--preparing and submitting for legislative consideration during the 1981 Session one or more districting plans. Section 4 of House File 707 sets out the redistricting standards that are to be followed in preparing plans.

The first standard relates to population equality. While it will permit the most populous district in each house to be as much as five percent larger than the least populous, it requires that the average deviation among all districts in each house not exceed a range of one percent. A more onerous requirement is that in a court challenge of a reapportionment plan, House File 707 places the burden on the state legislature to justify a variance in excess of one percent from the population of any district from the ideal district's population. The Legislative Service Bureau does not wish to have a plan drafted by the Bureau declared unconstitutional, so we will do everything possible to stay within this plus or minus one percent deviation. It should be noted, however, that even this narrow range is a considerably greater variation than that of the 1972 Supreme Court plan, which the state is now using.

Secondly, House File 707 requires that, to the extent possible within the population variance limitations of the first standard, the number of counties and cities divided among more than one district be as small as possible. This standard also states "when there is a choice between dividing local political subdivisions, the more populous subdivisions shall be divided before the less populous." However, that restriction does not apply when a county line divides a city; it will be possible in such a situation to draw a legislative district boundary along the county lines through the city.

The third standard simply requires that every district be composed of "convenient contiguous territory." This standard specifies that areas connected only at the points of adjoining corners are not contiguous. That may seem to be a bit unnecessary, but Iowa had a Senate district drawn in that fashion for a number of years.

The fourth standard set out in House File 707 relates to compactness of districts. While compactness is specifically assigned a lesser priority than the three previous standards, some fairly elaborate tests are set forth for measuring compactness either by hand or on the basis of computer generated data. The first standard of compactness requires that a district be as square as possible--that a district's length be as close as possible to the district's width. The second standard of compactness relates to the population dispersion within a district. The population dispersion should be as uniform as possible. For example a district that would place a large city or town in the center of the district would be preferred over a district that would place the same city or town at the corner of the district.

House File 707's fifth standard prohibits the drawing of any district with intent to favor a political party, incumbent legislator or congressman, or any other person or group, or for the purpose of strengthening or diluting the voting strength of any racial or language minority. Specifically, this standard excludes use of data such as addresses of incumbents, political affiliation of registered voters and previous election results. It also prohibits use of any such information as race, national origin or religious affiliation of residents, except as may be required by federal law. The reason for that last exception is to make sure the state is not precluded from complying with any provision of the federal Voting Rights Act that may be applicable now or in the future.

The sixth standard requires that each senatorial district consist of two entire house districts, and that to the greatest extent possible each senatorial district be entirely within a single congressional district. At this time, the Bureau does not expect Iowa to lose a seat in Congress as a result of this year's census, and obviously 50 senatorial districts do not divide evenly into six congressional districts. However, we will try to minimize the number of senate districts that cross congressional district lines.

There are two additional standards, but they do not relate directly to the composition of districts. One of them merely says that if a vacancy occurs in the 69th General Assembly, the special election to fill the vacancy shall be held in the same district from which the person whose seat is vacant was elected. In other words, the new districting plan will not be used prior to the primary election of 1982.

The final standard sets up the procedure for adjusting the staggered terms of state senators under the new districting plan, and will be explained later in this memorandum.

Redistricting Procedure. Using the standards just described, the Legislative Service Bureau is to prepare and deliver to the Secretary of the Senate and the Chief Clerk of the House a redistricting plan, which either the Senate or House is expected to debate and act upon without making any amendments except those of a purely corrective nature. However, there will first be public hearings on the bill. If the first house passes the bill, the second house is expected to follow a similar procedure in considering it.

Should either house reject the Service Bureau's first plan, the Secretary or the Chief Clerk, as the case may be, is to send to the Service Bureau any information which that body may direct regarding the reasons why the plan was not approved. The Service Bureau is then required to prepare a second plan, taking into account any objections expressed by the Senate or House, if it is possible to do so without violating the standards set forth in House File 707. The procedure established for consideration of the second plan is exactly the same as that for the first, except that there is no provision for public hearings on the second plan. That is primarily because of concern about the amount of time that will be required to complete legislative action on redistricting. Should either house reject the second plan, the Service Bureau is to prepare a third plan.

The third plan, if it is necessary, will be subject to amendment in the same way as any other bill when it is considered by the House or Senate. Since amendments will be permitted, it is assumed that no further entirely new plan will be needed.

Before the Legislative Service Bureau can complete any legislative districting plan, it must have the special legislative districting population data which federal law now requires the Census Bureau to furnish each state. That is because this will be the earliest data that will include precinct and city block population figures, which are necessary in order to divide the more populous cities in which two or more districts must be drawn. House File 707 is based on the assumption that such data might be delivered to Legislative Service Bureau as early as February 1, 1981, but unfortunately that assumption may not be realistic.

However, past experience suggests that official population figures for entire political subdivisions in Iowa--counties, townships and cities--may well become available in other Census Bureau material somewhat earlier than February 1. If so, this would not only allow the Service Bureau a headstart on preparing partial legislative redistricting plans, but we could even complete one or more congressional districting plans since the Iowa Constitution requires that congressional district boundaries follow county lines.

Accordingly, there is a provision in House File 707 requiring the Legislative Service Bureau to inform the presiding officers of each house if data needed to complete congressional districting plans becomes available at an earlier time than the special Census

Bureau data required for legislative districting. The presiding officers would then have the prerogative of directing the Bureau to proceed with preparation of one or more congressional districting plans for consideration by the Legislature. The procedure to be followed in considering the congressional districting plan will be substantially the same as that just described for the legislative districting plan.

As noted at the outset of these remarks, the Iowa Constitution requires only that legislative redistricting be completed by September 1, 1981. However, as a practical matter, the Legislative Service Bureau will be striving to meet a much earlier deadline.

House File 707 requires that we deliver the first legislative districting plan to the Chief Clerk of the House and Secretary of the Senate no later than April 1, 1981. If a second plan is necessary, it is to be delivered no later than May 1, or 14 days after defeat of the first plan, whichever is later. Should the third plan be needed, it must be delivered by June 1 or 14 days after defeat of the second plan, whichever is later.

These dates are based on the earlier-stated assumption that we will receive the special Census Bureau data by February 1. However, there is an "escape clause" which allows the Bureau one extra day, after the date when each plan is supposed to be delivered, for each day after February 1 that the Census Bureau data is delayed.

While the Service Bureau has not given up all hope of early delivery of the special Census Bureau data for Iowa, there are increasing indications that the data may be delivered nearer the April 1 deadline imposed by federal law than to our hoped for February 1 date.

Temporary Redistricting Advisory Commission. The new Temporary Redistricting Advisory Commission which will be set up under House File 707, has three responsibilities. It will serve as a sort of buffer for the Legislative Service Bureau while plans are actually being prepared; it may, under certain circumstances, have a limited advisory role to the Bureau; and, perhaps most important, it will conduct the public hearings on the Bureau's first plan.

The Commission will consist of five members, four of them appointed by legislative leaders. As soon as the new legislators elected next month have caucused and selected the Senate and House majority and minority floor leaders for the 69th General Assembly, those four leaders will each have the power to appoint one Commission member. House File 707 specifically allows this to be done before the new Legislature convenes.

The fifth Commission member is to be selected by agreement of at least three of the first four members appointed, and is to serve as Commission Chairperson. The fifth member must be selected by February 1, 1981.

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House File 707 provides that at any time prior to delivering a redistricting plan to the Legislature the Service Bureau shall provide to persons outside its own staff "only such information regarding the plan as may be required by policies agreed upon by the Commission." That is the Commission's buffer role. The prohibition on providing information does not apply, incidentally, to population data obtained from the Census Bureau.

Also, if in drawing a redistricting plan the Service Bureau finds it necessary to make a decision which does not appear to be governed by any of the previously-described standards set out in House File 707, the Bureau may submit to the Commission a written request for direction in the matter.

When the Service Bureau has delivered its first redistricting plan to the Legislature, the Commission is required, "as expeditiously as possible," to schedule and conduct at least three public hearings in different areas of the state, on the plan that has been delivered. After the hearings, the Commission is to submit to each house a report summarizing the testimony and other information received by the Commission in the course of the hearings, together with any comments and conclusions its members deem appropriate.

These hearings will prove valuable for two reasons. First, of course, they will provide the Legislature with input from the public on the first of the proposed districting plans the Service Bureau develops.

Secondly, the hearings phase should offer people an excellent opportunity to spot technical errors the Service Bureau might make, such as mislabeling a feature which is a part of a particular legislative boundary or listing two streets as intersecting when they actually do not. Another thing which can occur, particularly in urban areas, is the use as part of a legislative boundary of a feature which no longer exists. This actually happened in the original 1972 Supreme Court plan, which included as a district boundary a highway whose location had been changed as a part of a repaving project.

House File 707 does not provide for similar hearings on a second and third plan, if they are necessary. However, the bill does require the Commission to furnish to the public information about each plan including a copy of the bill describing the plan, maps illustrating the plan, and other details.

#### LEGISLATIVE REDISTRICTING THROUGH POLITICAL SUBDIVISIONS

The Service Bureau is aware that there has been considerable concern among legislators and others over the past several years about the irregularity of current legislative district boundaries, in terms of the frequency with which they cut across the boundaries of political subdivisions. This resulted from the Supreme Court's insistence on absolute maximization of population equality; but that comment is not intended as criticism of the court. While no member of the Service Bureau was privy to all of the Supreme

Court's deliberations on the plan, it seems likely that this occurred at least partially due to the Iowa Supreme Court's deference to a United States Supreme Court decision in a case called Kirkpatrick v. Preisler, 394 U.S. 526 (1969).

This case was issued by the United States Supreme Court in 1969 and involves congressional districts in the State of Missouri. The United States Supreme Court said in its decision on that case that any avoidable variance among district population was unacceptable. That decision was written in such a way that many authorities assumed it also applied to legislative districts, and the federal Supreme Court did not clarify that point until 1973--more than a year after Iowa (and most other states) had completed redistricting based on the 1970 census.

United States Supreme Court decisions in 1973 in cases from Connecticut and Texas make it clear that that Court is prepared to accept a somewhat greater population variance among legislative than among congressional districts. The Service Bureau believes the one percent average deviation and five percent overall variance allowed by House File 707 fall well within the limits now allowed by the United States Supreme Court.

No doubt these who come from a county small enough to be included entirely within one House district would prefer that the county be not divided in redistricting. Frankly, so would we--it would make our job far easier. But it is almost certainly going to prove impossible to avoid cutting some smaller counties if the Bureau is to remain within the population variance limits of House File 707. Nevertheless, the Legislature also said in that bill that the number of counties divided shall be as small as possible, and we will make every effort to comply with that policy.

At the very least, the Legislative Service Bureau is optimistic that it will be possible to avoid dividing any of the state's smaller cities in 1981, as was found necessary with cities such as Charles City, Knoxville and Creston in 1972. However, as was mentioned earlier, that does not necessarily apply to any city that happens to lie in two or more counties.

#### STAGGERED TERMS FOR STATE SENATORS

In regard to the arrangements provided for in House File 707 regarding election of senators under the new redistricting plan which the legislature presumably will enact, this bill does not require that every holdover senator's term be cut short, as was done by the Supreme Court in 1972.

Article III, section 6 of the Iowa Constitution (as amended in 1968) mandates that "as nearly as possible one-half of the members of the senate shall be elected every two years." Section 35 of that Article (also amended in 1968) says that the reapportioning authority "shall, where necessary in establishing senatorial districts, shorten the term of any senator prior to the completion of the term." (Emphases added.) It therefore appears that the basic policy of the state Constitution is that a senator elected to



a four-year term should be permitted to serve the full term if at all possible.

In 1972, the Iowa Supreme Court did cut short the terms of all holdover senators and required all fifty senators to run for re-election in that year, those from odd-numbered districts receiving two-year terms. Why did the court choose that option? Apparently for two reasons, although only one is specifically mentioned in the court's decision.

First, it will be recalled that upon adoption of the 1968 reapportionment amendment to the state Constitution, which reduced the size of the Legislature to fifty senators and one hundred representatives, the 1969 session had to pass a redistricting plan to effect that reduction. This plan was challenged and the Supreme Court found it unconstitutional, but nevertheless allowed its use for the 1970 election because the 1971 session would in any event have to redistrict on the basis of the 1970 census.

Therefore, the plaintiffs in the challenge to the plan passed in 1971 claimed, among other things, that all senators elected in 1970 had been elected under an unconstitutional plan and that they should be required to run again in 1972. The Court took note of this complaint in its decision.

A second circumstance was that, because of the cumulative effects of changes in Senate district boundaries made in 1964, 1965, 1967 and 1969, a situation had evolved in which, in 1970, twenty-seven of the fifty senators were elected for four-year terms despite the plain mandate of Article III, section 6 that one-half of the Senate be elected each two years. The 1971 plan passed by the Legislature did nothing to correct this situation; had the plan stood only twenty-three senators would have been elected in 1972. To correct this situation, had the Supreme Court not shortened the terms of all holdover senators, it presumably would have had to select two specific holdovers and shorten their terms. The court's decision does not mention this matter, but it may reasonably be assumed the Court would have been highly reluctant to single out individual incumbents in that way.

Neither of these circumstances will exist in 1981. In the 69th General Assembly, twenty-five senators, those representing the even-numbered districts, will have been elected for four-year terms under a constitutionally valid districting plan. Therefore, House File 707 provides for the following transitional adjustments to a new districting plan.

First, a senator will be elected in 1982 for a term of four years from every odd-numbered district. The odd-numbered districts under the present plan each elected a senator in 1978 and those senator's terms will expire in the normal course of events at the end of 1982.

If any senator who is elected this year to a four-year term, from one of the present even-numbered districts, finds himself or herself residing in an odd-numbered district under the 1981 plan,

that senator's term will be shortened. He or she will have to run again in 1982 if that senator wishes to remain in the Senate.

Where possible, an even-numbered district created under the 1981 plan will continue to be represented by a holdover senator until the 1984 election. This will be possible if there is residing within that even-numbered district one, and only one, incumbent senator elected in 1980 to a four-year term.

Even-numbered districts created under the 1981 plan will be required to elect a senator in 1982 for a two-year term under either of the following circumstances:

1. If no incumbent senator resides within the new district; or
2. If two or more incumbent senators reside within the new district.

In the latter case, should any or all of these resident senators be holdovers, their terms will be shortened accordingly.

Thus we know that--if House File 707 is implemented as now written--every odd-numbered district will elect a senator for a four-year term in 1982. Also, it is quite possible that some even-numbered districts will find it necessary to elect a senator for a two-year term in 1982. The net effect of this arrangement is to ensure that no senator is frozen out of office; every incumbent senator will either be a holdover or will have an opportunity to run for reelection.

R E A P P O R T I O N M E N T  
T I M E T A B L E

CONSTITUTIONAL

|              |   |
|--------------|---|
| September 1  | General Assembly deadline for adopting apportionment plan.  |
| September 15 | Supreme Court assumes duty to apportion state legislature if apportionment plan has not become law. |

CODE REQUIREMENTS

|            |  |
|------------|--|
| February 1 | Assumed date for delivery of census bureau population data. FOLLOWING DEADLINES ARE EXTENDED BY NUMBER OF DAYS CENSUS DATA DELAYED.  |
| April 1    | Legislative Service Bureau delivers redistricting plan to General Assembly.<br>Three public hearings by Redistricting Advisory Commission.<br>Commission report filed with General Assembly. |

7 days after Commission report filed, Code anticipates that first plan will be brought up for a vote in either house of the Legislature.

If plan is approved by first house, Code anticipates that the plan will be brought to a vote in the second house within 7 days.

If first plan is rejected:

|  |  |
|--|--|
| May 1<br>(or 14 days after first plan rejected in House or Senate) | Legislative Service Bureau delivers second redistricting plan to General Assembly. |
|--|--|

7 days after second plan submitted to Legislature, Code anticipates that second plan will be brought to a vote in either house.

If plan is approved by first house, Code anticipates that the second plan will be brought to a vote in the second house within 7 days.

If second plan is rejected:

|  |   |
|--|---|
| June 1<br>(or 14 days after second plan rejected in House or Senate) | Legislative Service Bureau delivers third redistricting plan to General Assembly. |
|--|---|

7 days after third plan submitted to Legislature, Code anticipates that the plan will be brought to a vote in either house. PLAN IS NOW SUBJECT TO AMENDMENT.

After plan approved by first house, Code anticipates that the plan will be brought to a vote in the second house within 7 days. PLAN IS ALSO SUBJECT TO AMENDMENT.

Legislative Service Bureau

TOTAL STATE POPULATION = 2854465  
 IDEAL DISTRICT POPULATION = 475744

| DISTRICT NUMBER | DISTRICT POPULATION | DEVIATION FROM IDEAL | PERCENT DEVIATION FROM IDEAL |
|-----------------|---------------------|----------------------|------------------------------|
| 1               | 495793              | 20049                | 4.214                        |
| 2               | 474719              | -1025                | -0.215                       |
| 3               | 462728              | -13016               | -2.736                       |
| 4               | 483717              | 7973                 | 1.676                        |
| 5               | 487813              | 12069                | 2.537                        |
| 6               | 449695              | -26049               | -5.475                       |

Congressional Districts  $\leq 1\%$   
 also  
 Burden of Proof Shifts to Legislature if a District's Population  $> 1\%$

| DISTRICT NUMBER | GEOGRAPHIC CENTER |        | POPULATION CENTER |        | LENGTH-WIDTH COMPACTNESS | LENGTH-WIDTH COMPACTNESS RATIO | POPULATION DISPERSION COMPACTNESS |
|-----------------|-------------------|--------|-------------------|--------|--------------------------|--------------------------------|-----------------------------------|
|                 | X                 | Y      | X                 | Y      |                          |                                |                                   |
| 1               | 20.248            | 4.422  | 21.605            | 5.065  | 0.080                    | 1.010                          | .8110                             |
| 2               | 21.551            | 10.905 | 21.549            | 9.965  | 3.360                    | 1.650                          | .8990                             |
| 3               | 14.934            | 12.306 | 15.554            | 11.653 | 0.130                    | 1.017                          | .9196                             |
| 4               | 15.271            | 3.628  | 13.492            | 5.361  | 0.480                    | 1.092                          | .4851                             |
| 5               | 8.212             | 4.268  | 8.317             | 5.175  | 2.880                    | 1.399                          | .9532                             |
| 6               | 5.788             | 12.715 | 5.239             | 12.191 | 2.240                    | 1.293                          | .9625                             |

POPULATION VARIANCE RATIO = 1.1025 Legislative Districts  $\leq 1.05$

TOTAL LENGTH-WIDTH COMPACTNESS = 9.1700

AVERAGE LENGTH-WIDTH COMPACTNESS RATIO = 1.2435

AVERAGE POPULATION DISPERSION COMPACTNESS = 0.8334

AVERAGE PERCENT POPULATION DEVIATION FROM IDEAL = 2.8090 Legislative Districts  $\leq 1\%$

GUIDE TO  
REDISTRICTING  
STATISTICAL STANDARDS

IDEAL DISTRICT POPULATION—Population of a district if all district's were equal in size.

DEVIATION FROM IDEAL—Population difference between a proposed district and an ideal district.

PERCENT DEVIATION FROM IDEAL—Population difference between a proposed district and an ideal district—expressed as a percent. Congressional districts may not vary by more than 1%. The average variation for house and senate districts may not exceed 1%. In a court challenge, the burden of justifying a reapportionment plan is placed on the Legislature if a district's population exceeds the ideal by more than 1%.

POPULATION VARIANCE RATIO—Ratio of the largest proposed district to the smallest. In both the House and Senate, the variance ratio must not exceed 1.05 (a 5% variation).

COMPACTNESS:

LENGTH-WIDTH COMPACTNESS—Number of units in which a district's length exceeds its width.

LENGTH-WIDTH COMPACTNESS RATIO—Ratio of a district's length to its width.

POPULATION DISPERSION COMPACTNESS—Measurement of the symmetrical aspects of the population dispersion in a district. The ideal population dispersion compactness would be 1.00. An ideal district would have its population uniformly dispersed about the center of the district.

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