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PROJECTED SCHOOL ENROLLMENTS  
TO THE YEAR 2000  
FOR  
TELLER COUNTY  
COLORADO

Dr. Marc Swadener

Bureau of Educational  
Field Services

SCHOOL OF EDUCATION  
UNIVERSITY OF COLORADO  
BOULDER, COLORADO

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TELLER COUNTY  
COLORADO

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School of Education  
University of Colorado  
Boulder, Colorado

for

The Board of Regents  
University of Colorado

August, 1981

SCHOOL ENROLLMENT PROJECTIONS  
TO THE YEAR 2000

TELLER COUNTY

Colorado

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INTRODUCTION

In December, 1978 the Regents of the University of Colorado requested a study projecting school enrollments in Colorado. The study was to project enrollments for each county and the state for each year from 1980 through 1990 and for the years 1995 and 2000. The initial report, for the state as a whole, was published in January, 1980. (9 and 10) The study then continued with the projection of school enrollments by county in Colorado. This document gives the projections for the above named county. For a comprehensive report for all counties the reader is directed to the comprehensive report and executive summary of this study (12 and 13).

SOURCES OF DATA

Data used as the bases for this study were obtained as follows:

1. Historical data were obtained in three primary areas.
  - A. Population data were obtained from the Division of Planning of the Colorado Department of Local Affairs and the Business Research Division of the College of Business and Administration, University of Colorado. (1, 4 and 7)
  - B. Live birth data for the years 1960 through 1979 were obtained from the Colorado Department of Health. (3)
  - C. School enrollment data for the years 1961 through 1979 were obtained from the Colorado Department of Education and the Colorado State Library. (2)

2. Data on projected population for the years 1980 through 2000 were obtained from the Colorado Department of Local Affairs Division of Planning. (6) Projected population for the years between 1985 and 1990 were obtained by linear interpolation from figures for the years 1985 and 1990. Projected population data used are considered to be conservative since they have been up-dated since the analysis was done for this study.

All the historical data in 1A, 1B and 1C are contained (along with other data) in the document titled POPULATION, LIVE BIRTHS, LIVE BIRTH RATE AND FALL PUBLIC SCHOOL ENROLLMENTS IN COLORADO COUNTIES 1960-1979. (8) For readers interested in these data, the above report is the only source in which population, live births and grade and total public school enrollments for all Colorado counties is included in one volume.

#### DEFINITION OF TERMS

There are some specialized terms which are used in this report. These are defined below.

1. Standard Live Birth date is the standard deviation of the deviations of the county mean live birth rate about the state mean live birth rate over the period 1960-1978.

2. Live Birth Rate is the number of live births per 1000 population.

3. Spread Factor is the decimal equivalent of the high projection as a percent of the low projection.

#### PROCEDURES

Procedures used in this study were a combination of several procedures. Each procedure will be addressed separately.

For each county a live birth rate was chosen as a basis for computing the projected live births. The live birth rate was determined by the following procedure.



A. The mean live birth rate for a county over the period 1960-1978 was used if: 1.) The county mean live birth rate over the period 1960-1978 was within one standard live birth rate (see the section titled definition of terms) of the state mean live birth rate over the same period; and 2.) if the standard deviation of the county live birth rate over the period 1960-1978 was less than or equal to one standard live birth rate. In essence the county mean live birth rate over the period 1960-1978 was used for a county if the rate for that county over this period was stable when compared to the live birth rate of all other counties AND the state as a whole.

B. If either or both of the two subcriteria in (A) did not hold then the lesser of the state mean live birth rate and the county mean live birth rate for the period 1960-1979 was used. The choice of the lesser of these two figures provided a conservative base for the projected live births, the choice of the mean provided stability.

Once the live birth rate was chosen by the above procedure, projected live births were computed based on projected population by dividing the projected population by 1000 and multiplying this figure by the chosen live birth rate.

In this study Colorado counties were divided into three groups (see Table I). Group A counties were those for which complete projections were possible. Complete projections include projections for all grades and total school enrollment for the years 1980-2000. Group B counties were those which only have projections for grade one through twelve in 1980, grades two through twelve in 1981, grades three through twelve in 1982, and so on through grades eleven and twelve in 1990. Group C counties are those for

which no school projections are possible, and therefore have no individual county report. However Group C counties have population and live birth projections in the comprehensive report (11) and are listed in the executive summary (12).

TABLE I. Numbered alphabetical list of Colorado counties. Those counties with only partial projections in this study are marked with a single asterisk (\*), counties with no school projections are marked with a double asterisk (\*\*), all others have complete projections.

COUNTY	COUNTY	COUNTY	COUNTY
=====	=====	=====	=====
1. Adams	17. Dolores **	33. Lake **	49. Pitkin **
2. Alamosa *	18. Douglas	34. La Plata	50. Prowers **
3. Arapahoe *	19. Eagle *	35. Larimer	51. Pueblo
4. Archuleta **	20. Elbert	36. Las Animas	52. Rio Blanco *
5. Baca **	21. El Paso	37. Lincoln **	53. Rio Grande **
6. Bent **	22. Fremont	38. Logan **	54. Routt *
7. Boulder	23. Garfield	39. Mesa *	55. Saguache **
8. Chaffee *	24. Gilpin *	40. Mineral **	56. San Juan *
9. Cheyenne *	25. Grand	41. Moffat *	57. San Miguel *
10. Clear Creek **	26. Gunnison **	42. Montezuma *	58. Sedgwick *
11. Conejos **	27. Hinsdale **	43. Montrose **	59. Summit
12. Costilla **	28. Huerfano **	44. Morgan *	60. Teller
13. Crowley **	29. Jackson	45. Otero *	61. Washington **
14. Custer **	30. Jefferson	46. Ouray **	62. Weld
15. Delta **	31. Kiowa	47. Park **	63. Yuma
16. Denver	32. Kit Carson	48. Phillips	64. STATE OF COLORADO
=====	=====	=====	=====

For all complete and partial projection counties projected grade enrollments for grades one through twelve in 1980, grades two through twelve in 1981 and so on through grades eleven and twelve in 1990 were computed in the following way. Each of the known grade level enrollments in 1979 was multiplied by a factor which represented the mean percent of students in one grade in one year entering the next grade the next year for each county for the years 1961-1979. These means were obtained from historical grade level enrollment data contained in table five of the report cited above.

(8) This process resulted in projected enrollments in grades one through twelve in 1980. The same process was repeated on this projected 1980 data to obtain projected enrollments in grades two through twelve in 1981. Iterations of this process produced successive enrollment projections through grades eleven and twelve in 1990. This method of projection is called the cohort survival method and of several methods attempted in this study was the most reasonable method for this portion of the projections for counties.

For the twenty-two counties with complete projections, the remaining grade level projections were obtained by first projecting grade one enrollments for each of the years 1982 through 2000 using an equation relating grade one enrollments to population and live births. (This equation is given in the appendix of this report for complete projection counties.) The equation was determined through a multivariate multiple regression procedure contained in the Statistical Package for the Social Sciences (SPSS) computer programs (11) available through the University of Colorado Computing Center. Once the grade one enrollments were obtained a procedure identical

to the cohort survival procedure described above was used to "fill in" grade projections for other grades for each year, with the exception of Kindergarten enrollment in the year 2000. This figure was computed based on projected grade one enrollment in 2000. Enrollment in Kindergarten is known to be on the average, over the past twenty years, a certain percent of enrollment in grade one in the same year for a given county. Projected grade one enrollment in the year 2000 was multiplied by the decimal equivalent of this percent to obtain projected Kindergarten enrollment in 2000.

For the twenty-two counties with complete projections, once grade level projections were obtained by the above procedure these projections were summed within years for both the "low" and the "high" projections. These sums were then corrected for enrollment in the grade level "other", based on average enrollment in this grade category for the period 1961-1979 as a percent of average total school enrollment over the same period. The above sum was multiplied by one minus the decimal equivalent of this percent to obtain projected total school enrollment. Projected enrollment in grade "other" was then obtained by subtracting from the projected total school enrollment the sum of the projected enrollment in grades Kindergarten through twelve.

The choice of placing each county in either the complete or partial projection category was a two step procedure. The first step included four criteria.

1. The value of the multiple correlation in the multiple regression for grade one must have been greater than .63 (i.e. the R squared greater than .4).

2. The ratio of the "spread factor" for total school enrollment for the year 2000 to the spread factor for population for the year 2000 must have been less than 1.3. This means that the spread of the high and low projected total school enrollments for the year 2000 could not be significantly different from the spread in projected population in the year 2000.

3. The ratio of projected enrollment to projected population for given years/grade levels must have been between .7 and 1.3 times the corresponding ratio for 1979.

4. All projections must have been positive. As a note of interest, due to erratic historical trends the applying of the multiple regression equation for grade one projections for six counties resulted in some negative entries later in the 1980-2000 period. These six counties were excluded from complete projections for this reason.

These four criteria were applied to each county as a "first cut" criteria. All four of these criteria had to apply for a given county in order to even consider including complete projections for a county. The result of this was that thirty counties were considered for complete projections, thirty three were considered for partial projections.

At this point in the analysis there were three groupings of counties. Complete projection counties, partial projection counties, and one-no school projection county, Hinsdale County, which does not have a secondary school.

A second round criteria was then applied to all but Hinsdale County. For each county the percent growth in total school enrollment and/or grade twelve enrollment over the period 1979-2000 or 1979-1990 was computed, yielding either four or two numbers depending on whether the county was at that point a complete projection or a partial projection county. From

each of these percents was subtracted the appropriate percent growth in population for that county. This difference was then compared with a corresponding figure for the state of Colorado as a whole to check for reasonableness of the projections. This procedure indicated that eight of the then complete projection counties were misplaced -- four were placed in the partial projection category and four were felt to be sufficiently outrageous to warrant making no school projections. Also of the thirty-three, then partial projections, twelve were felt to be reasonable and were retained as partial projection counties and twenty-one were felt to be unsuitable for school projections as completed in this study.

The end result is that there are twenty-two counties with complete projections in this study, sixteen counties with partial projections in this study, and twenty-five counties with no school projections in this study. Please note however that in the comprehensive report of this study (12) all counties have projections of population, live births and live birth rate (as chosen by the above procedure.)

Projected number of teacher and non-teacher personnel needed to support the projected total school enrollments were computed by multiplying projected total school enrollments by the decimal equivalent of the ratio of teachers to students and non-teacher certified personnel to students (29675 to 550,527 and 5206 to 550,527 respectively) for the state of Colorado as a whole in 1979.

#### ASSUMPTIONS

All research is based on certain assumptions. For this study several assumptions have been made.

1. It is assumed that historical trends established over the past twenty years in Colorado and Colorado counties will continue in the future.



This assumption, in the case of some counties, is tenuous but it is virtually impossible to tailor the procedures used to the unique situation in each county. The counties which at the present time appear to not fit this assumption are those counties that will be impacted by the development of the energy industry. For those counties, suitable adjustment of the projections given in this report, made on the basis of specific information, is warranted but is beyond the scope of this study. However, to some degree these factors are accounted for in the projections of population as used in this study.

2. It is assumed that the population projections used in this study, as published by the Colorado Department of Local Affairs, Division of Planning (6) are the best such projections available. Since the analysis for this study was completed the population projections have been updated by the Department of Local Affairs.

3. Due to the erratic nature of live births and live birth rate for many counties over the past twenty years, it is assumed that a fixed (as chosen) live birth rate for the next twenty years is the best basis for projecting live births.

## RESULTS

In this report the following information is given: a) For a county for which complete projections were possible, this report includes four tables of results. These tables include "low" and "high" projections. The "low" and "high" figures represent an interval within which there is a 50-50 expectation that the actual figures will fall. The tables include projections for population, live births, live birth rate, grade level enrollments, total school enrollments, and teacher and non-teacher

certified personnel needed to support these enrollments. In addition, for each of these counties, the formulas used to arrive at the school enrollment projections are given.

b) For a county for which partial projections are made, three tables for partial grade level enrollment projections are given. These partial projections include low and high projections for population, live births, live birth rate and some grade levels. The grade levels included are those for successive grades based on known 1979 enrollments. Thus for these sixteen counties only grade enrollments above "the diagonal" are given. All other entries in the school enrollment table are given as (-0) to indicate the projections in these areas were not possible with any reasonable degree of certainty, given the procedures used. The equations used to make the successive grade enrollment projections are also given.

Discussion and tables of results for this county are contained in the Appendix.

## References

1. Bureau of Business Research, School of Business, University of Colorado-Boulder, POPULATION BY COUNTIES 1920-1960. (Publication #3-1-1-1-20-60a)
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11. Nie, Norman, et al., STATISTICAL PACKAGE FOR THE SOCIAL SCIENCES, 2nd Ed., McGraw Hill, 1975.
12. Swadener, Marc, PROJECTED SCHOOL ENROLLMENTS IN COLORADO COUNTIES TO THE YEAR 2000 - COMPREHENSIVE REPORT, Board of Regents, University of Colorado and Center for Education Leadership Services, School of Education, University of Colorado-Boulder, August, 1981.
13. Swadener, Marc, PROJECTED SCHOOL ENROLLMENTS IN COLORADO COUNTIES TO THE YEAR 2000-EXECUTIVE SUMMARY, Board of Regents, University of Colorado and Center for Education Leadership Services, School of Education, University of Colorado-Boulder, April, 1981.

## Appendix

### Results and Discussion

Tables 60-1 through 60-4 present projections for Teller county for the period 1980-2000.

The population of Teller county is projected to change from 7,500 in 1979 to between 14,500 and 16,300 in the year 2000. This represents a change of between 93.33 and 117.33 percent over the period for an average compound annual growth rate of between 3.19 and 3.77 percent. By comparison, the population of Colorado as a whole is projected to grow from 2,716,000 in 1979 to between 3,979,579 and 4,731,733 in the year 2000 (10), a change of between 46.52 and 74.22 percent or between 1.84 and 2.68 percent average annual growth over the period 1979-2000. Also by comparison, the mean average annual growth in population for all sixty-three counties in Colorado is projected to be between 1.53 and 2.75 percent annually.

The live birth rate for Teller county is projected to be 15.6 per thousand population per year over the period 1980-2000. This figure is nearly equal to the mean live birth rate for Teller county over the past twenty years of 15.7 births per thousand per year.

Total public school enrollment in Teller county over the period 1979-2000 is projected to change from 2,003 in 1979 to between 4,007 and 4,413 in the year 2000. This represents a change of between 100.50 and 120.32 percent over the period for an average compound annual growth rate of between 3.36 and 3.83 percent. Projection of total public school enrollment for the state as a whole indicates a growth in enrollment of from 550,527 in 1979 to between 703,703 and 829,724 in the year 2000(10). This represents growth of between 27.71 and 50.71 percent over the 1979-2000 period or an average annual growth rate of between 1.17 and 1.97 percent.

For Teller county, total public school enrollment in 1979 was 26.71 percent of population. In the year 2000 it is projected that total public school enrollment in Teller county will be between 27.07 and 27.63 percent of population. For the state as a whole, in 1979, total public school enrollment was 20.27 percent of population and it is projected that in the year 2000 this figure will be between 17.54 and 17.67 percent.



Public school grade twelve enrollment in Teller county is projected to change from 168 in 1979 to between 311 and 341 in the year 2000. This projection represents a change in public school grade twelve enrollment over the period 1979-2000 of between 85.12 and 102.98 percent for an average annual growth rate in public school grade twelve enrollment of between 2.98 and 3.43 percent. For the state as a whole, public school grade twelve enrollment is projected to change from 40,939 in 1979 to between 43,438 and 51,260 in 2000(10). In percentage terms this represents a change of between 6.1 and 25.21 percent over the period or an average compound annual growth rate for public school grade twelve enrollment of between 0.28 and 1.08 percent.

Public school grade twelve enrollment in Teller county in 1979 was 2.24 percent of population. This figure is projected to change to between 2.09 and 2.14 percent of population in the year 2000. While on a statewide basis, public school grade twelve enrollment in 1979 was 1.51 percent of population and is projected to be about 1.08 percent in the year 2000.

Presuming that the ratio of teachers to pupils and the ratio of non-teacher certified personnel to pupils will remain relatively constant, the number of teachers and non-teacher certified personnel needed to support projected enrollments will change proportionally with the change in enrollment.

It is impossible to project where change will occur in the population or school enrollments within a county. Each county has unique growth patterns within that county which are dependent on many social and economic factors. Identification of these factors and their effect on growth patterns within a county are not a part of this study.

TABLE 60-1. LOW AND HIGH PROJECTIONS FOR POPULATION, LIVE BIRTHS AND LIVE BIRTH RATE BY YEAR.

YEAR	PROJECTED POPULATION		PERCENT CHANGE FROM PREVIOUS YEAR	PROJECTED LIVE BIRTHS		PERCENT CHANGE FROM PREVIOUS YEAR	PROJECTED LIVE BIRTH RATE		PERCENT CHANGE FROM PREVIOUS YEAR
1980	LOW	7600.		LOW	119.		LOW	15.6	
	HIGH	8300.		HIGH	130.		HIGH	15.6	
1981	LOW	7900.	3.947	LOW	123.	3.947	LOW	15.6	0
	HIGH	8700.	4.819	HIGH	136.	4.819	HIGH	15.6	0
1982	LOW	8300.	5.063	LOW	130.	5.063	LOW	15.6	0
	HIGH	9100.	4.598	HIGH	142.	4.598	HIGH	15.6	0
1983	LOW	8600.	3.614	LOW	134.	3.614	LOW	15.6	0
	HIGH	9500.	4.396	HIGH	148.	4.396	HIGH	15.6	0
1984	LOW	9000.	4.651	LOW	141.	4.651	LOW	15.6	0
	HIGH	9900.	4.211	HIGH	155.	4.211	HIGH	15.6	0
1985	LOW	9300.	3.333	LOW	145.	3.333	LOW	15.6	0
	HIGH	10300.	4.040	HIGH	161.	4.040	HIGH	15.6	0
1986	LOW	9640.	3.656	LOW	151.	3.656	LOW	15.6	0
	HIGH	10700.	3.883	HIGH	167.	3.883	HIGH	15.6	0
1987	LOW	9980.	3.527	LOW	156.	3.527	LOW	15.6	0
	HIGH	11100.	3.738	HIGH	173.	3.738	HIGH	15.6	0
1988	LOW	10320.	3.407	LOW	161.	3.407	LOW	15.6	0
	HIGH	11500.	3.604	HIGH	180.	3.604	HIGH	15.6	0
1989	LOW	10660.	3.295	LOW	167.	3.295	LOW	15.6	0
	HIGH	11900.	3.478	HIGH	186.	3.478	HIGH	15.6	0
1990	LOW	11000.	3.189	LOW	172.	3.189	LOW	15.6	0
	HIGH	12300.	3.361	HIGH	192.	3.361	HIGH	15.6	0
1995	LOW	12800.	16.364	LOW	200.	16.364	LOW	15.6	0
	HIGH	14300.	16.260	HIGH	223.	16.260	HIGH	15.6	0
2000	LOW	14500.	13.281	LOW	226.	13.281	LOW	15.6	0
	HIGH	16300.	13.986	HIGH	255.	13.986	HIGH	15.6	0
MEAN (1980-1990)	LOW		3.768	LOW		3.768	LOW		0
	HIGH		4.013	HIGH		4.013	HIGH		0

## 60 TELLER COUNTY, COLORADO

TABLE 60-2. PROJECTED GRADE LEVEL ENROLLMENTS BASED ON 1979 ENROLLMENTS, PROJECTED POPULATION AND LIVE BIRTHS, PROJECTED GRADE ONE ENROLLMENTS AND GRADE LEVEL SUCCESSION MULTIPLIERS GIVEN IN THE APPENDIX.

		GRADE LEVEL														TOTAL
YEAR		K	1	2	3	4	5	6	7	8	9	10	11	12	OTHER	
=====																
1980	LOW	118.	121.	136.	128.	165.	191.	171.	184.	164.	162.	203.	169.	145.	3.	2061.
	HIGH	126.	121.	136.	128.	165.	191.	171.	184.	164.	162.	203.	169.	145.	3.	2069.
1981	LOW	120.	137.	131.	148.	140.	179.	213.	198.	190.	176.	165.	189.	157.	3.	2146.
	HIGH	128.	147.	131.	148.	140.	179.	213.	198.	190.	176.	165.	189.	157.	3.	2163.
1982	LOW	125.	140.	149.	142.	162.	152.	198.	245.	204.	205.	180.	153.	175.	3.	2235.
	HIGH	135.	149.	159.	142.	162.	152.	198.	245.	204.	205.	180.	153.	175.	3.	2264.
1983	LOW	131.	146.	151.	162.	156.	175.	169.	229.	254.	220.	209.	167.	142.	3.	2314.
	HIGH	140.	157.	162.	173.	156.	175.	169.	229.	254.	220.	209.	167.	142.	3.	2356.
1984	LOW	139.	152.	158.	164.	177.	168.	195.	195.	237.	274.	225.	194.	155.	4.	2436.
	HIGH	149.	163.	169.	176.	189.	168.	195.	195.	237.	274.	225.	194.	155.	4.	2492.
1985	LOW	140.	162.	164.	172.	180.	191.	187.	225.	202.	256.	279.	209.	180.	4.	2550.
	HIGH	153.	174.	176.	184.	192.	204.	187.	225.	202.	256.	279.	209.	180.	4.	2624.
1986	LOW	145.	163.	175.	179.	188.	195.	212.	216.	233.	217.	261.	260.	194.	4.	2640.
	HIGH	158.	178.	188.	191.	202.	208.	227.	216.	233.	217.	261.	260.	194.	4.	2735.
1987	LOW	149.	168.	177.	190.	196.	203.	216.	245.	223.	251.	222.	243.	241.	4.	2727.
	HIGH	163.	184.	192.	204.	209.	218.	231.	262.	223.	251.	222.	243.	241.	4.	2846.
1988	LOW	153.	173.	182.	192.	208.	211.	226.	250.	254.	241.	256.	206.	225.	4.	2780.
	HIGH	168.	189.	198.	209.	224.	226.	242.	267.	271.	241.	256.	206.	225.	4.	2926.
1989	LOW	157.	178.	187.	198.	210.	225.	235.	260.	258.	273.	246.	238.	191.	4.	2861.
	HIGH	173.	195.	205.	216.	229.	242.	251.	279.	276.	292.	246.	238.	191.	4.	3037.
1990	LOW	162.	183.	193.	204.	216.	227.	250.	271.	269.	278.	279.	228.	220.	4.	2986.
	HIGH	178.	201.	211.	223.	236.	247.	268.	290.	289.	297.	298.	228.	220.	5.	3193.
1995	LOW	184.	209.	220.	233.	249.	262.	283.	318.	320.	335.	332.	306.	266.	5.	3520.
	HIGH	203.	230.	242.	257.	273.	287.	310.	348.	350.	365.	361.	328.	284.	6.	3845.
2000	LOW	202.	234.	247.	263.	281.	297.	323.	363.	367.	385.	382.	346.	311.	6.	4007.
	HIGH	224.	259.	274.	291.	311.	328.	355.	400.	403.	423.	420.	379.	341.	7.	4413.
=====																

TABLE 60-3. PROJECTED TOTAL SCHOOL ENROLLMENT BASED ON THE LOW AND HIGH POPULATION PROJECTIONS  
AND PROJECTED LIVE BIRTHS FROM TABLE 1.

YEAR	PROJECTED POPULATION		PERCENT CHANGE FROM PREVIOUS YEAR		PROJECTED TOTAL SCHOOL ENROLLMENT		PERCENT CHANGE FROM PREVIOUS YEAR	
1980	LOW	7600.			LOW	2061.		
	HIGH	8300.			HIGH	2069.		
1981	LOW	7900.	3.947		LOW	2146.	4.119	
	HIGH	8700.	4.819		HIGH	2163.	4.563	
1982	LOW	8300.	5.063		LOW	2235.	4.144	
	HIGH	9100.	4.598		HIGH	2264.	4.633	
1983	LOW	8600.	3.614		LOW	2314.	3.560	
	HIGH	9500.	4.396		HIGH	2356.	4.062	
1984	LOW	9000.	4.651		LOW	2436.	5.285	
	HIGH	9900.	4.211		HIGH	2492.	5.810	
1985	LOW	9300.	3.333		LOW	2550.	4.673	
	HIGH	10300.	4.040		HIGH	2624.	5.291	
1986	LOW	9640.	3.656		LOW	2640.	3.519	
	HIGH	10700.	3.883		HIGH	2735.	4.217	
1987	LOW	9980.	3.527		LOW	2727.	3.280	
	HIGH	11100.	3.738		HIGH	2846.	4.058	
1988	LOW	10320.	3.407		LOW	2780.	1.955	
	HIGH	11500.	3.604		HIGH	2926.	2.805	
1989	LOW	10660.	3.295		LOW	2861.	2.928	
	HIGH	11900.	3.478		HIGH	3037.	3.790	
1990	LOW	11000.	3.189		LOW	2986.	4.354	
	HIGH	12300.	3.361		HIGH	3193.	5.137	
1995	LOW	12800.	16.364		LOW	3520.	17.888	
	HIGH	14300.	16.260		HIGH	3845.	20.432	
2000	LOW	14500.	13.281		LOW	4007.	13.841	
	HIGH	16300.	13.986		HIGH	4413.	14.783	
=====								
MEAN			LOW	3.768			LOW	3.782
(1980-1990)			HIGH	4.013			HIGH	4.436

## 60 TELLER COUNTY, COLORADO

TABLE 60-4. NUMBER OF TEACHER AND NON-TEACHER CERTIFIED PERSONNEL NEEDED TO SUPPORT THE TOTAL SCHOOL ENROLLMENT PROJECTIONS GIVEN IN TABLE 2. THE RATIO OF STUDENTS TO TEACHER AND NON-TEACHER PROFESSIONAL STAFF FTE USED WAS THE SAME AS THESE RATIOS WERE IN 1979, APPROXIMATELY 18.5 TO 1 AND 106 TO 1 RESPECTIVELY.

PROJECTED POPULATION			PROJECTED ENROLLMENT	TEACHERS NEEDED	NON-TEACHER CERTIFIED PERS. NEEDED		
=====							
1980	LOW HIGH	7600. 8300.	2061. 2069.	111. 112.	19. 20.	LOW HIGH	1980
1981	LOW HIGH	7900. 8700.	2146. 2163.	116. 117.	20. 20.	LOW HIGH	1981
1982	LOW HIGH	8300. 9100.	2235. 2264.	120. 122.	21. 21.	LOW HIGH	1982
1983	LOW HIGH	8600. 9500.	2314. 2356.	125. 127.	22. 22.	LOW HIGH	1983
1984	LOW HIGH	9000. 9900.	2436. 2492.	131. 134.	23. 24.	LOW HIGH	1984
1985	LOW HIGH	9300. 10300.	2550. 2624.	137. 141.	24. 25.	LOW HIGH	1985
1986	LOW HIGH	9640. 10700.	2640. 2735.	142. 147.	25. 26.	LOW HIGH	1986
1987	LOW HIGH	9980. 11100.	2727. 2846.	147. 153.	26. 27.	LOW HIGH	1987
1988	LOW HIGH	10320. 11500.	2780. 2926.	150. 158.	26. 28.	LOW HIGH	1988
1989	LOW HIGH	10660. 11900.	2861. 3037.	154. 164.	27. 29.	LOW HIGH	1989
1990	LOW HIGH	11000. 12300.	2986. 3193.	161. 172.	28. 30.	LOW HIGH	1990
1995	LOW HIGH	12800. 14300.	3520. 3845.	190. 207.	33. 36.	LOW HIGH	1995
2000	LOW HIGH	14500. 16300.	4007. 4413.	216. 238.	38. 42.	LOW HIGH	2000
=====							

\*\*\*\*\*  
FORMULA FOR THE PROJECTION OF GRADE ONE ENROLLMENTS GIVEN IN TABLE 2.

$$\begin{aligned}
 \text{GRADE ONE ENROLLMENT} = & ( .01188221 ) \text{ TIMES THE POPULATION DURING THE YEAR OF ENROLLMENT} \\
 & + ( .14995955 ) \text{ TIMES THE NUMBER OF LIVE BIRTHS DURING THE YEAR OF BIRTH} \\
 & + ( .00026217 ) \text{ TIMES THE POPULATION DURING THE YEAR OF BIRTH} \\
 & + ( 29. )
 \end{aligned}$$

$$R \text{ SQUARED} = .75964 \quad F = 9.48102 \quad \text{SIGNIFICANCE} = .004 \quad N = 13$$

\*\*\*\*\*  
FORMULAS FOR THE SUCCESSIVE GRADE LEVEL ENROLLMENTS

$$\begin{aligned}
 \text{ENROLLMENT IN GRADE 1} &= ( 1.1633 ) \text{ TIMES ENROLLMENT IN KINDERGARTEN THE YEAR BEFORE} \\
 \text{ENROLLMENT IN GRADE 2} &= ( 1.0812 ) \text{ TIMES ENROLLMENT IN GRADE 1 THE YEAR BEFORE} \\
 \text{ENROLLMENT IN GRADE 3} &= ( 1.0872 ) \text{ TIMES ENROLLMENT IN GRADE 2 THE YEAR BEFORE} \\
 \text{ENROLLMENT IN GRADE 4} &= ( 1.0944 ) \text{ TIMES ENROLLMENT IN GRADE 3 THE YEAR BEFORE} \\
 \text{ENROLLMENT IN GRADE 5} &= ( 1.0809 ) \text{ TIMES ENROLLMENT IN GRADE 4 THE YEAR BEFORE} \\
 \text{ENROLLMENT IN GRADE 6} &= ( 1.1113 ) \text{ TIMES ENROLLMENT IN GRADE 5 THE YEAR BEFORE} \\
 \text{ENROLLMENT IN GRADE 7} &= ( 1.1544 ) \text{ TIMES ENROLLMENT IN GRADE 6 THE YEAR BEFORE} \\
 \text{ENROLLMENT IN GRADE 8} &= ( 1.0350 ) \text{ TIMES ENROLLMENT IN GRADE 7 THE YEAR BEFORE} \\
 \text{ENROLLMENT IN GRADE 9} &= ( 1.0779 ) \text{ TIMES ENROLLMENT IN GRADE 8 THE YEAR BEFORE} \\
 \text{ENROLLMENT IN GRADE 10} &= ( 1.0204 ) \text{ TIMES ENROLLMENT IN GRADE 9 THE YEAR BEFORE} \\
 \text{ENROLLMENT IN GRADE 11} &= ( .9296 ) \text{ TIMES ENROLLMENT IN GRADE 10 THE YEAR BEFORE} \\
 \text{ENROLLMENT IN GRADE 12} &= ( .9262 ) \text{ TIMES ENROLLMENT IN GRADE 11 THE YEAR BEFORE} \\
 \text{ENROLLMENT IN KINDERGARTEN IN THE YEAR 2000} &= \text{THE ENROLLMENT IN GRADE 1 THAT SAME YEAR DIVIDED BY } ( 1.1568 ) \\
 \text{TOTAL SCHOOL ENROLLMENT} &= \text{THE SUM OF ENROLLMENTS IN GRADES K THROUGH 12 DIVIDED BY } ( .9985 ) \\
 \text{ENROLLMENT IN GRADE OTHER} &= \text{TOTAL SCHOOL ENROLLMENT MINUS THE SUM OF ENROLLMENTS IN GRADES K THROUGH 12.}
 \end{aligned}$$



