

## **APPENDIX B**

*Nevada School District Organization and Control:  
Meeting the Challenges of Growth and Diversity*, prepared by  
Management Analysis & Planning Associates,  
Berkeley, California, dated August 1996 (the final MAP Report)



**MAP**

**MANAGEMENT  
ANALYSIS &  
PLANNING  
ASSOCIATES**

**Nevada School District  
Organization and Control:  
Meeting the Challenges  
of Growth and Diversity**

*James W. Guthrie  
Gerald C. Hayward  
Michael W. Kirst  
Julia E. Koppich  
Mary Lee McCune  
James R. Smith*

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**2039 Shattuck Avenue, Suite 301  
Berkeley, California 94704**

**Phone: 510/649-1030 • Fax: 510/649-1512**





# INTRODUCTION

This report, "Nevada School District Organization and Control: Meeting the Challenges of Growth and Diversity," was undertaken at the behest of the Nevada state legislature. In 1995, the Legislature passed a resolution requesting an analysis of the overall appropriateness of Nevada's school district organizational structure. Did the present system of county-by-county school district organization foster excellence in education as well as make efficient use of public resources? Did existing boundaries enhance government responsiveness? Contribute to civic and social well-being? Ensure equitable treatment of all students as well as taxpayers?

In conducting an investigation responsive to these questions, Management Analysis & Planning Associates has presented its analysis in terms of six chapters and four appendices:

- Chapter One establishes the foundation for the remainder of the report. It provides historical context for the school reorganization debate in Nevada and sets out the evaluative criteria that have guided MAP's analytic effort.
- Chapter Two offers a set of alternative procedures for changing school district boundary configurations that the Legislature may choose to consider.
- Chapter Three provides a detailed look at the complex issue of how school construction is financed in Nevada; of the problems inherent in the present method; and of options for addressing those problems.
- Chapter Four identifies the important technical considerations—including equity of educational funding and maintenance of employee salaries, benefits, and rights—which must be resolved in advance of implementing any district-reorganization plan.
- Chapter Five distills information regarding charter school statutes as a strategy for possibly expanding the reorganization options available to the Legislature.
- Chapter Six presents county-by-county profiles and, where warranted, reorganization options. Again, MAP has been asked by the Legislature to suggest options, not make recommendations. Accordingly, in this section we weigh each option against the five criteria presented in Chapter One.

Following Chapter Six is a set of supporting appendices.

Appendix A describes MAP's methodological strategies for executing this study.

Appendix B is a detailed explanation of the Nevada Plan, the state's principal school finance mechanism.

Appendix C is the text of a paper on education technology which MAP commissioned for this study.

Appendix D is an annotated bibliography of research on the relative cost and achievement results associated with various school and district sizes.

## *Executive Summary*

This report, "Organization and Control of Nevada's Public Schools: The Challenge of Growth, Diversity, and Uncertainty" responds to a 1995 state legislative resolution requesting an analysis of Nevada school district organization.<sup>1</sup>

### **Purposes**

The Legislature seeks answers to questions concerning Nevada's existing school district boundaries. Specifically, does the present organized pattern:

- Facilitate appropriate education of children?
- Enhance government effectiveness and responsiveness?
- Efficiently utilize taxpayer resources?
- Contribute to civic and social well-being?
- Ensure equitable treatment of students and taxpayers?

### **Methods**

To assist in answering these questions, MAP undertook a five part information collection and analysis strategy.

- Relevant documents were reviewed. These were obtained from state and local officials. Archives were researched for appropriate historic information. Information was sought from other states and from national sources which might shed light on Nevada circumstances.
- Visits were made to each of Nevada's seventeen county school districts. Discussions were held in these settings with professional educators, parents, elected officials, and civic leaders. Public hearings were held in each county.
- Quantitative information regarding items such as enrollments, assessed valuation, total revenues, spending patterns, population characteristics, geographic features, school locations, and attendance patterns were collected from numerous state, local, and federal government sources and used as bases for analysis.

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<sup>1</sup> In its 1995 session, the Nevada Legislature enacted SCR-30 authorizing this study. MAP was selected from a competitive bidding process. The study was initiated in November of 1995. The final report was delivered in August of 1996. Management, Analysis & Planning is a professional management consulting firm specializing in education. MAP is located in Berkeley, California.

- Newly developed computer software programs were employed to array school district, financial, and demographic data in varying geographic configurations.<sup>2</sup> This activity was undertaken in order to simulate the possible consequences of alternative school district boundary changes.
- Alternative boundary changes and other prospective reforms were reviewed for technical accuracy by a wide array of experts and other individuals familiar with Nevada.

### General Observations

From the above listed processes, MAP concludes:

- Nevada's extremes of population sparsity, density, and rate of growth present intense challenges to any change in existing school district boundaries.
- Nevada's current arrangements for generating and distributing school operating revenues (the "Nevada Plan") are among the most effective in the nation, and act in concert with existing school district boundary arrangements to create conditions of remarkable interdistrict resource equality. MAP proposes that, in the event that school district boundary changes were made, the equalization features of its school finance formula be preserved by collecting sales tax and property tax revenues county-wide and distributing them back to districts on a per-pupil basis.
- Nevada's mechanisms for generating and distributing revenues for school facilities construction are particularly problematic. The funding of school construction contributes to troublesome inequalities that may provide fodder for potentially successful legal challenges. One option the State could adopt for addressing this concern is full state assumption of capital funding, which could cost as much as \$275 million per year. Another, perhaps more attractive, option would be a state/local partnership in which the local districts' contribution would be equalized in a manner similar to the way the Nevada Plan equalizes operating revenues.
- Charter schools offer a mechanism whereby schools can achieve autonomy from district or state control to innovate and be more responsive to local needs and aspirations. To realize the full promise of charter schools it is necessary to maximize their autonomy.

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<sup>2</sup> Specifically, MAP relied upon a program called "Arcview." (See Appendix A).

- Nevada, in general, and remote and sparsely settled rural areas, in particular, could benefit substantially from expanded state leadership in the acquisition and use of instructional technology.
- Nevada and especially Clark County have given insufficient consideration to the consequences of school enrollment size. The weight of empirical-research evidence suggests that schools of a medium size (300—400 students for elementary schools and 600—900 for secondary schools) are the most effective in facilitating student academic achievement and extracurricular participation. School size appears to be of particular consequence for students from low-income households. Such students do better in the small-school environment.
- Under current state law, school district boundary changes can be made only by action of the Legislature and approval of the Governor. Precedent and procedures exist in other states whereby local citizens can initiate boundary changes. MAP outlines procedures for consideration that facilitate local initiative while retaining adequate safeguards to ensure fairness. Even if such procedures were adopted, the Legislature would retain its constitutional authority to establish and change school district boundaries.

### Appraisal Criteria

MAP identified five criteria that Nevada decision-makers may find useful in appraising the utility of prospective school district boundary alterations. Each of these is defined and described in detail in the body of the report. In general, however, the five critical criteria against which reorganization proposals were measured included:

1. Educational Effectiveness—The relationship between organizational size and ability to provide appropriate curriculum choices and special education support.
2. Racial and Ethnic Composition—The goal of promoting an integrated public school setting in which all students have equal access to an excellent education.
3. Organizational Scale—The questions of optimum organization and size in terms of operating costs.
4. Governmental Responsiveness and Community of Interest—The drawing of boundaries that encourage identification, commitment and participation in local school governance.
5. Financing and Facilities—The impact of redistricting on stable funding of the operation and construction of schools.

## Specific School District Boundary and Organizational Considerations

### *Nevada, Other than Clark County*

Nevada's sixteen districts, excluding Clark County, present numerous situations in which decision makers may wish to consider alternative school district boundary arrangements. These selected situations could be made directly by the State Legislature, or that body could call for a vote of the citizens affected.

The specific county situations are as follows:

Carson City/Douglas County School Districts—A joint venture of the two school districts might allow construction of a new high school near the border between the Carson City and Jack's Valley/Indian Hills communities, thereby serving the needs of both districts.

Douglas County School District—A proposed new district located in and around Zephyr Cove on Lake Tahoe fares well on most criteria. Such a district would be of sufficient size to operate a viable program. It would reinforce an identifiable community of interest without damaging other communities of interest. Such a change of boundaries would, however, require significant additional state funding according to the existing terms of the "Nevada Plan," and create great disparities in capital outlay capability. This situation could be mitigated if sales and property taxes were to continue to be collected county-wide and disbursed on an equitable per pupil basis. Statewide equalization of capital funding would eliminate disparities created by unequal assessed value.

Elko/Eureka County School Districts—Elko County's population is growing rapidly due to expanding employment in major gold mines located in adjacent Eureka County. Under current law, sparsely populated Eureka County reaps the revenue generated by the mines, even though Elko must provide schools and other services to a rapidly expanding population.

Merging the two districts seems to offer several advantages. Elko's access to a significantly larger tax base would provide more revenues for constructing and renovating schools. It could create economies of scale in administrative cost and improve educational effectiveness by promoting greater specialization and program support. An added benefit of this merger is a savings to the state school fund of nearly \$24 million. These gains may be accompanied by some loss of governmental responsiveness and sense of community cohesion in Eureka County.

Alternatively, the Legislature might revisit the idea of establishing a special tax assessment district, dedicating a portion of Eureka's revenues from mining to Elko to help offset the cost of constructing schools made necessary by the children of employees of mines in Eureka County.

Esmeralda/Nye County School Districts—Merging the small and declining school population of Esmeralda County with the northern half of Nye County School District offers several potential benefits. Such a consolidation should bring economies of administrative scale and improvement in the educational program. On the other hand, citizens of Esmeralda may experience some loss of community cohesion and government responsiveness. Such a merger would be revenue-neutral to the State.

Pershing/Humboldt County School Districts—Approximately 184 students living in the Grass Valley area of Pershing County attend school in Winnemucca in Humboldt County. This makes sense geographically—the nearest school in Pershing County would be a four-times-further commute. However, the parents of these students are unrepresented in the governance of the school district their children attend; and, although it is not currently proposed, the interagency agreement allowing this exchange to occur could be dissolved at any time by either district. Formalizing the existing situation by incorporating the Grass Valley area into the Humboldt District would have little impact on educational effectiveness, organizational scale, or racial composition. The financial effect would also be negligible.

Nye County District Deconsolidation—The huge expanse of Nye County is punctuated with population concentrations whose makeup and economic base varies from place to place. There may be some advantages, in terms of community of interest, to dividing the existing district into a northern and a southern district, with Pahrump forming one part and the rest of the County, north of Pahrump forming the other. Pahrump is a rapidly growing suburban community which is socially, culturally, and economically distinct from the rest of the County. It is 175 miles away from the district headquarters in Tonopah. Having two districts, one focusing on issues primarily related to rural areas, the other on suburban Pahrump, might provide an administrative focus which would improve both school systems.

Nye/Eureka County School Districts—An interdistrict agreement allows high school students from the community of Duckwater in Nye County to attend school in Eureka, which, although 50 miles distant, is far closer than the Nye County alternative. A case can be made for merging the Duckwater area with the Eureka District. The benefits are marginal and may not justify the stress of reorganization.

Storey/Lyon County School Districts—Students from the Mark Twain area straddling the Lyon-Storey border who reside in Storey County attend school in Virginia City, 50 miles away. Those who live on the Lyon County side of the line attend school in nearby Dayton. Annexing all of Mark Twain to the Lyon County School district has been proposed. This reorganization would have a mixed impact as judged against the stipulated criteria. Some students would likely benefit from it; others might suffer.

Storey/Washoe County School Districts—Graduates of Hillside Elementary school in Lockwood, which is part of the Storey District, currently attend high school in Washoe County in order to minimize travel time. Merging the Lockwood area into Washoe County has been proposed. This reorganization would have a mixed impact as judged against the stipulated criteria. Some students would benefit from it; others might suffer.

Washoe County Deconsolidation—Washoe County School District, the second largest in Nevada in terms of population, operates an elementary, middle, and high school for about 1,400 students in the resort community of Incline Village. Incline Village is separated from the main population concentration in the county by 35 miles and a 9,000-foot mountain and has a strong sense of community identity. Creating a separate school district in Incline Village would have little impact on educational effectiveness, organizational scale, or racial isolation in Washoe County. However, such a change of boundaries would require additional state funding according to the existing provisions of the "Nevada Plan," and create disparities in capital outlay capability. Fiscal concerns could be addressed if sales and property taxes continue to be collected county-wide and disbursed pro-rata on a per-pupil basis. A statewide capital outlay equalization formula could remove any impediments caused by unequal assessed value.

### *Clark County*

Observers and current school district clients acknowledge Clark County school district strengths. Nevertheless, many critics assert that individual Clark County schools, as well as the school district itself, are overly large, bureaucratically inefficient, and governmentally unresponsive. To the extent to which decision-makers choose to act upon these observations, there are at least four possible solutions which can be mixed and matched as appropriate.

*Enhance site-based management*— Other sectors of the economy are achieving improved productivity by delegating more decision-making authority to the units closest to the client. In school districts this would take the form of educators and parents at local schools having a greater say over how resources are deployed at that school site. In order for school-based management to become a reality, a number of changes in state law would be required. Among these changes are:

- Provisions for passing a substantial portion of revenues to the school
- School-level accounting
- Enhanced school performance reports
- Improved state assessment
- Value-added testing
- Parental choice regarding which school children attend
- School-based purchasing power
- Improved parental access to information



- Assistance to low-performing schools
- Sanctions for persistently low-performing schools

*Increase Number of School District Trustees* —Clark County currently has seven district or area elected school board members. This number could be expanded up to, for example, nine, eleven, or thirteen. Each of the newly created positions might be elected district-wide, thus providing the board with a balance of those representing specific subsections of the County and those responsive to the County at large.

*Charter Schools* —Clark County, or State officials, could grant charters of authority to individual schools, within Clark County or elsewhere in Nevada. Such charters could range in the degree of authority delegated to individual schools. However, whatever the balance struck, the intent would be to permit those in an individual school community to assume greater discretion over the operation of the individual school.

*Alternative Boundary Configurations*—Various alternative boundary configurations were attempted. The most successful of these was based on constructing eight districts of similar enrollments, none of which had a minority population equal to or greater than half. It was possible to create districts without majority minority populations; however, it was not possible to simultaneously control disparities in assessed value or sales tax revenues. For these districts to be viable it would be necessary to collect and disburse operating revenues county-wide and to equalize capital outlay revenues state-wide.

Deconsolidation of Clark County will be a complex and difficult process. The task is complicated by the extreme concentration of hotels and casinos, which generate a significant portion of the property-tax and sales-tax that fund school operations, and revenues by densely clustered and racially homogeneous housing patterns. It is exacerbated by the size and location of schools. These factors combine and interact in ways that cause the solution of one problem to create another.

Some of these problems yield more easily to technical solutions than others. Inequalities related to property-tax and sales-tax revenues can be resolved by maintaining the county as the unit for collecting and disbursing school revenues. The state can equalize funding for capital outlays. Even where facilities are unequal, cash can compensate for differences. Other problems are more difficult to solve. Residential patterns change slowly and most parents would prefer that their children attend school relatively close to where they live. Several smaller neighborhood high schools would provide more freedom to draw new district boundaries, but Clark County high schools tend to have large enrollments and attract students from a large geographic area, thus making it more difficult to balance districts on the basis of race and provide adequate school capacity.

The problems would probably be magnified if the decision is to proceed with a full-scale break up of the district. A more incremental approach may allow citizens and decision-makers to feel their way, to create one or two smaller districts, and to proceed further or retreat as their experience dictates. Such an approach, combined with managerial and representational changes described above, may enhance the probability of citizen satisfaction and reduce some of the risks. It is likely, also, that the risk will be lowered and satisfaction elevated if any changes result from citizen initiative rather than state action.

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## CHAPTER 1

# ESTABLISHING THE CONTEXT AND SPECIFYING EVALUATIVE CRITERIA



## CHAPTER 1

### ESTABLISHING THE CONTEXT AND SPECIFYING EVALUATIVE CRITERIA

This chapter undertakes two principal tasks. First, it describes the context for this report—why district boundary considerations are important, and why they are important now for the State of Nevada. Second, this chapter provides a description of and rationale for the set of analytic criteria, or standards, by which policy-makers and others can judge the relative merits of boundary alternatives. We emphasize here, as we do throughout the report, that where MAP presents potential changes in boundary configuration, they are to be considered options for policy-makers' deliberations, not mandates for change.

#### *The Context for This Study*

"Nevada School District Organization and Control: Meeting the Challenges of Growth and Diversity" responds to a 1995 state legislative resolution requesting an analysis of Nevada school district organization.<sup>1</sup>

The Legislature seeks to know whether Nevada's existing school district boundaries:

- Facilitate the appropriate education of children
- Enhance government effectiveness and responsiveness
- Efficiently utilize taxpayer resources
- Contribute to civic and social well-being
- Ensure equitable treatment of students and taxpayers

Answering questions such as these entails considering personal preferences, relying on political judgments, and gathering and analyzing technical information. Deciding the worth of a user-friendly government, wherein public officials are easily accessible to constituents, may result in government units which are smaller in size than what might otherwise contribute to optimum economic operation. High schools with small enrollments might have to sacrifice highly specialized academic offerings in return for a sense of

<sup>1</sup>The Nevada Legislature enacted SCR-30 authorizing this study.

community, personal engagement, and camaraderie that some believe is virtually priceless. Riding a school bus for two or more hours a day may entail personal sacrifice that a budding mathematician or star athlete might be willing to make in order to obtain the instruction or coaching necessary to rise to world-class status. For some citizens, as well as students and their parents, the money, effort, and time involved in these tradeoffs would not be justified by the possible rewards. For others, the sacrifice would be willingly accepted.

There is much about government and governing which involves personal values and political tastes. This is how it is and should be, and MAP wishes it no other way. In addition, however, technical information can assist public officials in making difficult decisions. Empirical research can illuminate the possible consequences of prospective actions. For example, analyses can suggest the size range within which organizations are likely to be most effective or operationally efficient. Similarly, for example, technical analyses can suggest the likely tax revenue or student-transportation consequences of a school district boundary change. Also, analysis can illustrate the possible value conflicts confronting decision-makers in deriving solutions. It is not at all unusual in policy and practice to have to sacrifice some measure of equality to obtain or preserve a measure of liberty or choice, or to sacrifice some measure of liberty to obtain an added amount of efficiency.

American representative government is designed to engage in such deliberations and arrive at acceptable decisions, decisions in which costs are balanced against benefits. Where political tradeoffs are involved, few, if any, parties to the decision may be completely satisfied. However, generally, decisions will have been undertaken within a framework in which those affected will have a voice in the outcome.

The role of Management, Analysis & Planning in this endeavor consists of the following: to provide technical counsel; to gather accurate information and candid impressions; to generate a reasoned range of alternative actions; to explain likely practical consequences of varying decisions among these alternatives; and to suggest conditions under which values will conflict and political tradeoffs will need to be determined.

During the past nine months, MAP analysts have criss-crossed the state of Nevada, visiting each county, gathering data from every school district, meeting with professional educators and public officials, and listening at public hearings. MAP conducted literally hundreds of interviews, digested reams of documents, compiled numerous statistical profiles, reviewed past reports and research studies, and distilled dozens of suggestions regarding school district organization and governance.



The results of MAP's consulting efforts are contained in this report to the Legislature, citizens, professional educators, parents, and pupils of Nevada. The report begins with a discussion of the public policy significance of school district governance and organization; proceeds to describe a set of contemporary challenges to Nevada school district governance and organization which emerges from statewide conversations; reports upon a set of criteria for appraising school governance and organization changes; describes several strategies for meeting these challenges; and concludes with detailed analytic profiles and organizational alternatives for each Nevada County.

### **School District Boundaries: How Can Such a Small Matter Loom So Large?**

A reader might reasonably wonder, *"How can consequential issues flow from a seemingly mundane topic such as school district boundaries?"*

The answer to this question stems from the grant of governing authority which accompanies decisions about boundaries. A school district boundary—almost any government boundary, for that matter,—conveys a series of privileges and responsibilities. What may, at the simplest level, appear as a narrow line printed on a map, is in fact, a specified charter of authority which substantially determines where a child attends school and how far he or she may have to travel to get there, what the school building will look like, who a child's classmates will be, who pays for that schooling, what will be taught and who will teach it, and who has a voice in making these and other such decisions.

Thus, a seemingly simple line on a boundary map expands legally into a wide swath of consequences, some quite practical, others quite philosophical. Practically, where a boundary is drawn can reach directly into a household and influence how early a child has to wake up each morning to get to school on time, the length of a bus ride, how many and which fellow students she plays with once there, the nature of instruction each school day and the amount of homework each night, chances for later attending college, and how much of a child's parents' income is taxed to pay for these activities.

This slate of day-to-day practical circumstances eventually pyramids into often monumental consequences, such as the long run viability of a local community and the vitality of its economy, the personal predisposition of citizens, the nation's social fabric, and the long-run freedom and well-being of the entire society. It is these consequences that ultimately render questions of school district boundaries so fundamental.

## Historical Perspective

Nevada last examined the statewide issue of school district boundaries in the middle of this century. A landmark study undertaken by consultants from Peabody College concluded that the then-existing model of 173 local elementary school districts and 35 high school districts should be dramatically altered.<sup>2</sup> This 1954 report recommended that relatively small local units be consolidated into a vastly reduced number of districts and aligned with county government boundaries. The report also recommended that elementary and secondary school districts be combined into unified organizations responsible for operating all kindergarten-through-twelfth grade schools within their individual jurisdictions.

State officials agreed with these recommendations and, effective in 1956, Nevada boundaries took their current configuration of 17 county unified (K—12) districts. This configuration places Nevada among a small minority of mostly southern states which rely heavily upon county school districts<sup>3</sup>

When the Peabody analysis was undertaken, Nevada had only 31,000 public school students. These attended school in 158 elementary districts. (Nevada then had 15 so-called "non-operating" elementary districts which had taxing authority but did not operate schools.) In addition, there were then 35 high school districts, half of which were county-wide operations.

The Peabody report was principally concerned with the educational consequences of small schools, particularly small high schools. The frames of the report frequently acknowledged circumstances of population sparsity and rural remoteness which could necessitate the formation and maintenance of unusually small schools. However, they generally oriented their arguments toward recommending that multiple small districts, many with overlapping authority, be consolidated into larger county units which, they contended, could operate more efficiently and provide better, more specialized, instruction to students.

What the Peabody consultants regarded as an optimum size school was one that was sufficiently large to justify one teacher per grade level at the elementary grades and three teachers per grade level in secondary schools. For them, the optimum senior high school contained 300 students, and the optimum school district contained a thousand pupils. Esmeralda County then had a total of 66 students, 13 of whom were in high school. Storey County had 96 students, 20 of whom were in the secondary grades. Little

<sup>2</sup> *Public Education in Nevada*, Division of Survey and Field Services, George Peabody College for Teachers, Nashville, Tennessee, 1954.

<sup>3</sup> Alabama, Delaware, Florida, Georgia, Louisiana, Maryland, Tennessee, South Carolina, and West Virginia organize their school districts along county boundaries. Hawaii has a statewide system and does not rely at all upon conventional local school districts.

wonder that the 1950s analysts were fixated on means for enhancing the instruction of students in such small units. They could not easily anticipate the population growth of even Washoe County, which in 1952—53, had fewer than 8,000 students. Clark County's 1952—53 enrollment was 10,583 students.

In the intervening period since the Peabody report, selected regions within Nevada have undergone soaring growth; a few other locations have actually lost population. This ebb and flow is a normal course of events, and it generally is impossible to predict the path of population migrations more than a decade in advance. Thus, it is typical to undertake a periodic assessment of the situation and determine if any boundary or organizational change is appropriate. It is in this vein that MAP is undertaking this appraisal and offering the Nevada legislature a series of school district boundary-configuration alternatives from which to choose.

However, whereas small schools and sparse population were virtually an obsession with consultants four and five decades ago, today's picture has been dramatically altered. Contemporary policy-makers face a more complicated problem. A current appraisal of school district boundaries and organization in Nevada is complicated by the extremes, both large and small, which characterize the state's new population patterns. District enrollments in 1952—53 ranged from 66 to 10,583. To be sure, this was a wide spectrum. However, overwhelmingly, most districts were then small. In 1952—53, the median district enrolled fewer than 1,000 students. Only two counties in the entire state enrolled anything substantially in excess of 2,000 students. Equivalent figures today range from 124 to 166,788, with a median district size of 3,845. Clark County is now the tenth-largest school district in the entire nation, and it is continuing to grow. Tailoring new systems to these altered circumstances is the contemporary challenge.

### **The Contemporary Nevada Context**

As Nevada's citizens prepare for the 21st century, they face a different set of challenges regarding school organization than did their 1950s counterparts. Sparsity was a principal focus of the Peabody consultants four decades ago, and it remains a major condition to consider. However, in addition, Nevada's school organization and control arrangements must now cope with soaring growth in selected geographic areas, an increasingly heterogeneous urban population, the effective management of one of the nation's largest school districts, the financial inequality which characterizes Nevada's current school construction arrangements, and the design of a school governance system which can cope with these complicated, sometimes conflicting, conditions in an uncertain future.

## *The Challenge of Growth, Diversity, and Uncertainty*

Three challenges confront Nevada decision makers as they contemplate the most efficient and effective boundary configurations for the state's school districts. These are growth, diversity, and uncertainty.

### *Growth*

Any motorist traveling the sparsely settled eastern border might be surprised to learn that Nevada is among the nation's most urban states.<sup>4</sup> Eighty-eight percent of the population resides in one of the state's two urban areas.<sup>5</sup> Clark County, with a population in excess of a million people, and continuing to grow rapidly, dominates the state statistically. Washoe County, though perhaps small when compared to Las Vegas, is also heavily urban. Several other counties (e.g., Douglas and Elko) are also growing rapidly. However, they start from a vastly smaller population base than either Clark or Washoe County. Much of the remainder of the state is remarkably rural by modern American standards. Indeed, Esmeralda County, with only slightly more than 100 students, is among the nation's smaller school districts.

Whereas there are the above-mentioned remote regions of the state, areas in which the population is stable and, in some instances, declining, other areas of Nevada are among the fastest growing in the nation. Figure 1 displays the pupil population growth by county over the last five decades.<sup>6</sup> For the state as a whole, one can see that enrollments have grown by more than eight times over the period involved.

<sup>4</sup>This in the case when measured as percent of population residing in urban areas.

<sup>5</sup>Outz, Janice Hamilton, *Nevada's Changing Population*, Washington D.C.: Institute for Educational Leadership, Center for Demographic Policy, 1993.

<sup>6</sup>In 1952, Carson City County was known as Ormsby County.

**Figure 1**  
**Nevada K—12 Comparative Enrollments by County**

County	1952—53	1995—96	Percent Change
Churchill	1,245	4,470	359
Clark	10,583	166,788	1,576
Douglas	397	7,090	1,786
Elko	2,074	9,861	375
Esmeralda	66	124	188
Eureka	145	308	212
Humboldt	726	3,845	530
Lander	279	1,639	587
Lincoln	920	1,109	20
Lyon	1036	5,426	524
Mineral	1686	1,160	(31)
Nye	576	4,528	786
Carson City	792	7,694	971
Pershing	540	967	179
Storey	96	480	500
Washoe	7,723	47,572	516
White Pine	2,181	1,980	(9)
<b>Total</b>	<b>31,065</b>	<b>265,041</b>	<b>853</b>

Magnitude and sparsity are opposite sides of the growth coin for Nevada. Clark County represents the converse of rural Nevada's population sparsity.<sup>7</sup> The school district currently has nearly 170,000 students and is expected to continue to grow at least until the end of this century. It is now the tenth largest school district in the nation. Organizations this large present unique management challenges. Performance evaluation, resource allocation, and accountability mechanisms must be redesigned because face-to-face communication is simply no longer possible. These conditions also provoke questions regarding appropriate governance and control mechanisms.

Not only is Nevada both urban and rural, the rural part of the state has regions which are remarkably remote, where population density is among the lowest in the nation. Students in Duckwater have to travel two hours each way to attend schools and, frankly, there is little that can be done about the situation. One hour bus rides to and from school are common place in rural

<sup>7</sup> Even this statement is too sweeping. Clark County contains approximately 8,000 square miles all by itself. Whereas it contains a large, growing, heterogeneous, and reasonably compacted school population, it also contains rural and sparsely populated areas. In effect, Clark County is itself a microcosm of the remainder of Nevada.

Nevada. The examples could continue, but the point would be the same. There are no population centers close to these students, and transportation is the only answer. Moreover, once they arrive at school, there are, relatively speaking, few classmates with whom they can associate. Huge distances and small numbers of people are simply a fact of rural life in Nevada. A school governance system must accommodate this condition.

### *Diversity*

Not only is Nevada's population growing fast and distributed in an uneven manner, the population is increasingly diverse. This is particularly true in the state's urban areas. Figure 2 below displays the changes in racial and ethnic composition which have occurred over the past decade.

**Figure 2**  
**Changes in Nevada's Population by Race and Ethnicity**

Race/ Ethnicity	1980	1990	Percent Change	Nevada Percent	National Percent
White	700,345	1,012,695	44.6	84.3	80.3
African/ American	50,999	78,771	54.5	6.6	12.1
American Indian	13,308	19,637	47.6	1.6	0.8
Asian Pac Islnd	14,164	38,127	169.2	3.2	2.9
Other	21,677	52,603	142.7	4.4	3.9
<b>Total All Races</b>	<b>800,493</b>	<b>1,201,833</b>	<b>50.1</b>		
Hispanic any race	53,879	124,419	130.9	10.4	9.0

As can be seen, the population increasingly reflects a measure of racial and ethnic diversity. Fiscal inequality is another dimension of diversity Nevada faces. Taxable wealth is no more equally distributed geographically than is Nevada's population or population growth. The state relies principally upon a mix of property, sales, and gaming revenues for the support of public services. These revenue sources are heavily skewed. Clark County, dramatically, contains the state's major sources of taxable wealth. Eureka County, because of its mineral deposits, is also unusually wealthy. Other counties, such as Mineral, have little wealth to tap.

The state's principal mechanism for generating revenues for public schools, aptly named the Nevada Plan, is one of the most effective school financing schemes in the nation in terms of equalizing local school district per pupil *operating* revenues. It functions in a manner which dramatically reduces the consequences of wealth differentials between school districts.

However, the Nevada Plan does not cover revenues for school construction. Consequently, county wealth differences translate into varying capacities for generating funds for school construction. Figure 3 displays, hypothetically, and for each of Nevada's 17 county school districts, current per-pupil property assessed values and the dollar amount per pupil that would be raised from a .01 percent property tax (ten mills) imposed for school construction financing.

Figure 3  
Nevada K—12 Comparative Wealth by County<sup>8</sup>

County	Total \$/AV (In \$000)	Enrollment	AV/\$/PP	\$/PP
Carson City	\$738,281	7,694	\$95,955	\$959
Churchill	354,383	4,470	79,280	792
Clark	18,909,830	166,788	113,376	1,133
Douglas	1,143,674	7,090	161,308	1,613
Elko	671,773	9,861	68,124	681
Esmeralda	45,948	124	370,551	3,705
Eureka	1,022,679	308	3,320,388	33,203
Humboldt	469,391	3,845	122,078	1,220
Lander	241,974	1,639	147,635	1,476
Lincoln	78,072	1,109	70,399	703
Lyon	425,487	5,426	78,416	784
Mineral	175,707	1,160	151,472	1,514
Nye	566,582	4,528	125,129	1,251
Pershing	145,157	967	150,111	1,501
Storey	87,611	480	182,524	1,825
Washoe	5,863,539	47,572	123,256	1,232
White Pine	162,241	1,980	81,940	819
State Mean or Total	31,102,329	265,041	117,349	1,173

Wealth differences of this magnitude render it difficult to contemplate school district boundary changes without reinforcing, and probably exacerbating, current construction inequalities.

Should Nevada consider altering school district boundaries—and even if current boundaries remain unaltered—the state almost inevitably will be led to a discussion about school construction and resulting revenue inequities. MAP has thus provided a section of this report on construction finance alternatives.

<sup>8</sup> The above analyses assume the imposition of a .01 percent property tax for school construction, applied to the county's current Assessed Value (AV) base, 1994 data.

### *Future Uncertainty*

When the Peabody report regarding Nevada school district organization was undertaken four decades ago, no one could have foreseen the extraordinary growth and development that would take place in Nevada. It is no more likely that today's analysts and decision-makers will accurately forecast the next half century. Demographic trends, technological innovations, economic cycles, and ecological conditions can interact to create a virtually unpredictable long-range future. Will rural Nevada remain undeveloped? Will Clark County continue to grow? What might high speed transport between the Los Angeles basin and Las Vegas portend? What might be the consequences of extraordinarily low-cost desalinization? New mineral discoveries are always a possibility.

Uncertainties such as these have always been a component of human existence. However, the rapidity at which such changes now occur, and the vast numbers of people affected by them, render it ever more important to design governance arrangements which, even if they cannot always deduce future developments, have a good chance of productively accommodating them.

A conventional answer to uncertainty is to encourage decision making decentralization. The logic argues that multiple and smaller decision units have a better chance of productively coping with the unexpected, and divining useful solutions, than does a central authority which acts slowly and perhaps rigidly. However, education and the future represents something of a special case. Education spreads its consequences across numerous agents. Good schooling benefits the individual, his or her family, the local community, and the entire state and polity. Hence, there are multiple interests at stake and a simple imploration to decentralize is inappropriate and inefficient. For education, local control must be appropriately balanced against state interests.

The extremes of population density, increasing diversity, inequalities of wealth, and uncertain future conditions which face Nevada render it difficult to design a one-size-fits-all school district boundary or organization solution. Thus, MAP has visited each county school district separately and has arrived at a separate set of local area considerations for each<sup>9</sup>

Additionally, MAP has included in this report a set of governance and control alternatives for state-level legislative consideration. These alternatives address the above-described challenges of providing a good education in the

<sup>9</sup> For added detail, see *Nevada Study of School District Organization Progress Reports Number One and Number Two*, Management Analysis & Planning Associates, Berkeley, California, February 1996 and April 25, 1996.



face of population sparsity, Clark County organizational complexity and enrollment magnitude, school construction funding inequalities, and future uncertainty.

### *Criteria for Considering Reorganization Options*

Whereas the challenges to Nevada's educational future may dictate separate analytic considerations for each locality, and, possibly, new state policy considerations, they do not necessitate entirely different appraisal criteria. Because education has both local and statewide implications, it is also appropriate, for state purposes, to examine all of Nevada's districts through a common set of lenses. These uniform or statewide evaluative criteria—the standards by which to judge boundary alternatives—are the subject of this report section.

How, or by what standards, should deliberative bodies and the general public judge whether or not to alter a school district boundary? This is not a simple question. As emphasized at the beginning of this report, answers to this query are heavily fraught with subjective values. What is more valuable, easy access to government officials, in which case a relatively small and geographically compact district may be appropriate, or a governmental unit which can afford specialized academic and social services for students?

Several concrete and philosophical criteria have emerged from MAP's Nevada-wide interviews, conversations, and public meetings with citizens, state and local officials, parents, students, and professional educators. These criteria are a practical translation of the overarching policy questions posed by the Legislature.

Five evaluative criteria by which to appraise alternative school district boundary considerations are discussed here: **(1) educational effectiveness, (2) racial and ethnic composition, (3) organizational scale, (4) governmental responsiveness and community interests, and (5) financing and facilities.** These are not mutually exclusive categories; components of one overlap and interact with others.

It is not possible to assign weights to these criterion categories, to assert that one is more important than another. They are all important. However, one or a combination of these evaluative criteria may prove more applicable in some circumstances than in another. For example, concern for the racial and ethnic consequences of a boundary change may more immediately effect Clark County than it would a rural county with a racially homogeneous population. Ultimately, however, each of these dimensions will involve a political judgment by public officials.

## Educational Effectiveness

Parents want, and children deserve, an education system characterized by high expectations, high standards, and resulting high levels of academic performance. Policy-makers and educators share in this desire for a high-quality education system statewide and district-by-district.

This is not to suggest that an action so apparently simple, at least in a technical sense, as changing school district boundaries will make education better. Redrawing district boundaries, either to render districts larger or smaller, is by itself, unlikely to contribute significantly to the solution to Nevada's complicated educational problems. However, in examining alternative organizational and governmental arrangements, one must be careful to ensure that proposed alternatives, at a minimum, do not damage and, more positively one hopes, actually offer an opportunity to improve education for all students.

Where schooling and educational quality are concerned, there are at least two, and perhaps three, Nevadas. There is a rapidly growing urban Nevada located principally in Clark County and, secondarily, in and around Washoe County. There is a sparsely populated and heavily rural Nevada comprised of 13 or 14 counties. Rapidly growing, but not yet urban, counties such as Elko or Douglas may comprise yet a third Nevada.

At least two of these categories face somewhat different education challenges. Putting aside the awesome growth of Clark County for the moment, there are large numbers of youngsters in this district from low-income and limited-English-speaking households, and youngsters who change schools with alarming frequency. For these students, carefully considered and intense instructional services appear to be in order. But the fact that the district is growing rapidly renders the challenge even more difficult.

Rural Nevada has extreme needs for special services also, particularly high-level academic instruction in advanced subjects to secondary students, and remedial and specially tailored instruction for low-achieving or disabled students.

MAP asks the question: "What organizational and governance arrangements will most likely provide the curriculum coverage, instructional competence, learning incentives, fiscal resources, professional expertise, and operational flexibility to enable Nevada's educators and citizens to best address these varying circumstances?" This is not the place to provide an exhaustive analysis of the problem. However, we will provide several examples in order to emphasize the principle involved.

Before providing these examples, however, it is important to emphasize that, regardless of school district boundaries, the state has a major role to play in ensuring high education standards. By continually providing school districts with advice and guidance regarding curriculum matters, instructional materials, professional development for teachers, instructional technology, and educational achievement standards; by appraising pupil, school, and school district performance through a statewide testing program; and by ensuring effective consulting advice to local districts and schools, state officials can exert enormous influence upon the quality of instruction in even the most remote and small school district. In short, an effective state education department can assist in overcoming many of the challenges connected with sparsity, small district size, and remoteness.

Even assuming a highly effective state assistance strategy, however, boundary and governance considerations can influence local school district instruction. Here is an extreme example, but one which nevertheless applies in the Nevada context. Children can reside within the boundaries of a given district but their residence may actually be closer geographically to a school in an adjoining district. Having to travel a lengthy distance to an assigned school, perhaps on a school bus, could subtract significantly from the time that a child might otherwise use to engage in homework, do chores, or simply play with friends. Fortunately, Nevada has seen fit to provide for interdistrict transfer arrangements, and many burdens of distance can be mitigated as a result.<sup>10</sup>

However, there are more subtle means through which school district boundaries and organization can influence a child's education. For example, some states continue to fall prey to district configurations which serve only elementary or only secondary students. Plans for a complete curriculum and the articulation of expectations across grade levels are at risk accordingly. Nevada, with its previously-mentioned mid-twentieth century boundary reforms, eliminated this potential problem for most children. Some students, however, attend elementary school in one district and secondary school in another, and have no assurance that their elementary and secondary programs are articulated.

For small and remote districts, the largest challenge to effective instruction stemming from school district boundary considerations concerns curricular adequacy, teacher recruitment and retention, and the provision of specialized services. Exceedingly small school districts risk not being able to provide specialized academic courses, such as physics or other advanced sciences. Increasingly, "distance learning" through satellite broadcasts or cable arrangements, can compensate for this condition. Still, even with the

<sup>10</sup>See NRS 392.010. To Nevada's credit, the possibility of out-of-district attendance even encompasses the possibility of out-of-state attendance. The right to attend the school nearest to one's home is not absolute in these cases, however, as either district can veto the arrangement at any time.

prospect of compensating avenues, one has to take organizational scale into account when considering boundaries.

Similarly, unusually small districts may be unable to provide sufficient specialized services for disabled or gifted students. Here, as with academically specialized courses, compensating arrangements are possible. For example, several small counties can join together to form a consortium, or a joint venture agency, or can contract with a regional community college to provide specialized services. However, arrangements of this sort must be consciously developed. They do not happen by themselves.

Teacher recruitment and retention is another challenge for unusually small and remote school districts. State policy can assist on this dimension by enabling rural districts to compensate teachers at a higher rate or through other subsidies, such as the provision of housing. Nevada's current school finance plan recognizes necessary small and remote schools. Whether current subsidies are sufficient is not a consideration in this study. However, any possible alterations to school district boundaries must be mindful of the potential impact upon districts' abilities to attract and retain able teachers.

Being too small is not the only problem. Districts may also become too large. Before mentioning this downside, it is important, however, to acknowledge that large districts may have the advantage of providing specialized curricula and services to children and, often, are able to attract large concentrations of able teachers. For unusually large districts, the principal risk to educational quality is that a district will become so large that interpersonal communication becomes mechanical, rules become rigid and burdensome, and teacher and school administrator creativity and initiative are stifled as consequences.

Finally, drawing boundaries can dictate the racial and socioeconomic mix of a district or school. One of the most powerful educational forces is the social and economic composition of the other students with whom a child attends school. Thus, drawing school district boundaries should give consideration to the boundary's likely influence on student body composition. This is a topic to which we turn in greater detail in the next section.

## Racial and Ethnic Composition

The changing nature of Nevada's population is reviewed in Figure 2 (page 12). Whereas the state, in general, is becoming ethnically more diverse, rural Nevada continues to be inhabited principally by whites.<sup>11</sup> School district boundary and governance matters in rural Nevada are unlikely to be controversial on this dimension. However, Clark County and Washoe County have minority populations of significant size. Any possible reforms of school district organization and governmental arrangements, at a minimum, should give consideration to the risk of exacerbating existing racial and ethnic imbalances.

In providing alternative boundary arrangements for policy makers to consider, MAP-modeled analyses will enable Nevada officials to appraise the extent to which they wish to use school attendance to improve racial and ethnic integration. We also add here an important caution. Federal and state case law is replete with desegregation litigation. Some of these cases are specifically about district boundary changes—instances of enhancing or inhibiting racial isolation. While no one can say with complete certainty what the legal ramifications of a boundary change might be, there is sufficient precedent to assert with reasonable confidence that any redistricting that results in racial or ethnic segregation is likely to be subject to a legal challenge.

## Organizational Scale

Nevada has school districts and individual schools at both ends of the continuum of organizational scale. Esmeralda County has one of the smallest school enrollments of any county district in the nation. Conversely, Clark County is one of the nation's ten largest districts. Thus, the consequences of scale are important for Nevada. MAP has reviewed the research literature on this topic to link organizational scale with three dependent variables—operating costs, educational effectiveness, and governmental responsiveness.

The science of determining optimum organizational size is imprecise. It is possible to specify organizational scale extremes, small and large, which may prove overly costly. However, the economies of size distribution between such extremes is inconsistent; it does not appear to be linear. Moreover, the research challenge is intensified by the interactions of scale economies with other values, such as the educational effectiveness of schools and the responsiveness to citizens of governmental arrangements. Small school districts and small schools may have the advantage of easy citizen and parent

<sup>11</sup> While this statement is true, as the subsequent county school district profiles display, even rural Nevada is becoming ethnically more diverse.

access to decision-makers, and may possibly be educationally more effective. However, they may sacrifice some scale economy advantage in the process.

It is not only district-wide scale economies which are significant. Evidence on organizational scale also suggests that large schools are less conducive to student learning, particularly of the learning of low-income students, than are small schools. Large schools are also associated with higher levels of student violence and other anti-social behavior. Small schools allow greater productive participation by both parents and students. Thus, drawing school district boundaries in a manner which encourages or compels the existence of large schools may impede effective education.

“Large” and “small” both have advantages. For example, extensive offerings of highly specialized services, such as advanced science, mathematics, and foreign language, are more easily organized and paid for where there are large numbers of students desirous of such services. Experience has shown that many large districts fail to exploit fully this potential. Such rich program offerings are a challenge both organizationally and financially in a small school district. Conversely, access to decision making, personal knowledge of decision makers, and parent participation may be assisted by relatively small neighborhood schools and smaller, more local school districts.

Accountability is also influenced by organizational scale. Few mechanisms are as effective in ensuring efficient resource utilization as citizen concern and oversight. However, there are structural features which themselves can contribute to efficient resource utilization. Here again, we refer to matters of organizational scale. A school district which is too large, either in terms of enrollments or geography, may be more costly or may have to rely upon particular administrative arrangements to ensure efficient resource utilization. Conversely, school district boundaries which encompass too few students may contribute to disproportionately high administrative and operational overhead.

#### *Nevada Historical Perspective*

Both in its evolution and its current status, Nevada's school district organization serves as a microcosm of the nation. Early in this century, the nation and Nevada were characterized by literally hundreds (thousands for the United States) of small rural school districts. In 1929, there were 127,500 school districts nationwide. A reform effort mounted by National Education Association (NEA) officials, business leaders, and university professors argued that small districts were economically inefficient and educationally ineffective. The reformers were remarkably persuasive, even in the absence

of empirical research results. Momentum built, and the number of districts has been reduced ninefold to today's national total of 15,200.<sup>12</sup>

The nationwide school district consolidation movement has created two kinds of school districts: ones that are remarkably large and another set of many thousands of quite small and medium-sized districts. Here is a profile of today's situation:

Big districts dominate in enrollments. Presently, 50 percent of America's public school students attend school in only five percent (750) of the nation's districts. Of the remaining districts, most are overwhelmingly small. For example, 90 percent of U.S. school districts enroll 3,500 or fewer students. Eighty percent of districts enroll 2,500 or fewer students.

Taken on its face, this 75 year-long school district consolidation movement has not delivered on the reformers' promises. There is no evidence that schooling costs are lower today as a consequence. In each of the past five decades, school costs (controlling for inflation) have increased approximately ten percent per pupil. Whatever cost savings might have resulted from school district consolidation appear to have been eaten up by added transportation and administrative costs. Second, today's challenge of low education achievement is overwhelmingly to be found in large, not small and medium size, school districts.

However, the school district size issue cannot fairly be examined on its face. The issues are more complicated. While we have created larger school districts, our nation has simultaneously undergone dramatic shifts in population composition. Large districts today are also the home for America's largest concentrations of low income, limited-English-speaking, and disabled students. Thus, analyses of school district size are complicated by necessary consideration of the social and economic characteristics of the students involved. What can be said about the consequences of organizational size, once efforts are made to control scientifically for the characteristics of the students involved?

### ***Research Results***

To shed light on this issue, MAP compiled a comprehensive list of social science studies concentrating on the relationship in school districts of organizational size and operating costs. In addition, because of the frequent reliance of large school districts upon large enrollment schools, MAP also examined research results regarding the relationship of school size to student academic achievement.

<sup>12</sup> The definitive history of this movement is recorded by David B. Tyack in *The One Best System*, Cambridge, Harvard University Press, 1979.

Insofar as possible, MAP has paid particular attention to those studies of districts and schools which have attempted to take the social and economic characteristics of students into account while examining the consequences of size. The results of this examination are distilled below. However, before reviewing these findings, a reader should understand that no definitive research exists on these matters of organizational scale, operating cost, and academic achievement consequences.

The results which do exist are remarkably consistent, in favor of medium and smaller organizational size. However, it is virtually impossible to identify a research study in which one has complete confidence. There are many confounding variables, such as local region labor market competitiveness, nature of the school curriculum, state-imposed class size and teacher salary minima and maxima. The field is simply insufficiently explored to provide a definitive foundation. Nevertheless, having offered all of the caveats, acknowledging that no single study is beyond reproach, it is worth emphasizing that the weight of the evidence strongly suggests that smaller is better.

- The most costly districts to operate, on a per-pupil spending basis, are those at the extremes of the size continuum. Under 400 students and in excess of 50,000 students define “small” and “large” in these circumstances. Unusually large districts, such as Clark County, tend to spend less per pupil on central office administrative costs. However, they lose this cost advantage when their school-site operating costs are considered.
- The added costs associated with unusually large school districts stem from the predilection of such districts to operate unusually large schools. Large schools consistently have higher per-pupil administrative costs. For example, a recent study undertaken by University of Southern California Professor Lawrence Picus, relying upon the Common Core of Data collected by the National Center for Education Statistics (NCES), found that districts with 500—1,000 students spend 5.4 percent of their total operating budget on school site administration. Districts with more than 10,000 students allocated 8.7 percent of their operating budget to school site administration.

School size is also important for student achievement.

- Large elementary schools, those with enrollments exceeding 1000, are consistently associated with lower levels of student achievement.
- Smaller schools are consistently associated with higher levels of student achievement. This latter finding is particularly true for students from low-income households.



- High schools with enrollments between 600 and 900 students consistently appear to have the highest levels of academic achievement. Schools noticeably smaller and larger, for example high schools with more than 2000 students, are characterized by lower levels of student achievement.
- Minority and low-income students appear unusually vulnerable academically in schools which are too large.
- Districts with large schools (more than 900 enrollees) can capture some of the advantages of smaller schools by dividing large units into schools-within-schools.

### *Deconsolidation History*

What about attempts to make school districts smaller? Here there is not much history. In the course of attending public hearings in Clark County, the suggestion was repeatedly offered to MAP consultants that efforts at deconsolidation elsewhere in the nation should be examined. MAP, despite diligent efforts, was unable to identify such instances. San Antonio, Texas and San Jose, California, large cities encompassing many smaller school districts, were never consolidated and, thus, though they were suggested to MAP as examples of "deconsolidated" districts, are not. The only example MAP can identify seems inapplicable to Nevada. New York City, in 1972, was broken into 32 elementary districts, all feeding into a central city high school district. However, each of the 32 districts is itself the size of Syracuse, and can hardly be taken to be deconsolidated in so far as these constituent districts do not have formal taxing authority.

## **Governmental Responsiveness and Community Cohesion**

The placement of jurisdictional boundaries can influence the extent to which citizens identify with, feel committed to, and participate in their government institutions. It also can influence the degree of citizen oversight and accountability. Boundaries can enhance and reinforce community cohesion, or, if drawn or redrawn in an ill-considered manner, can damage a sense of community.

Redrawing jurisdiction boundaries to enlarge a unit of government to make that government unit more inclusive, does not guarantee that all residents included within the new borders will automatically form a cohesive, albeit larger, community. Matters of self-identification, bonding, and group perception are far too complicated to hinge on government boundaries alone. One need only reflect on conflict-ridden situations such as Bosnia to see that social matters such as ethnic and religious identity, economic trade, and historic disputes can transcend cartographic boundaries and persist over long periods of time regardless of where lines are drawn on a map. However, if

there are predispositions for group cohesion, drawing new boundaries may reinforce the condition.

If a community of interest already exists, downsizing a district, redrawing boundaries to create two or more units where there was once one, can be particularly damaging. Those activities in which residents were once jointly engaged, school- and community-related efforts which are conducted separately under the new arrangements, are no longer activities which are reinforcing of community bonds. Hence, those who propose to divide a unit or simply alter the boundaries are well advised to pay particular attention to the consequences for existing communities of interest.

School district boundaries have a particularly influential role in the formation or reinforcement of communities. Schools can serve as the focal point of community social and civic activities. Thus, district boundaries, and school attendance areas, can shape, or even destroy, a sense of community by dividing or combining neighborhoods. Transporting students from one neighborhood to another, perhaps to overcome crowded school conditions or to mitigate racial segregation, must be undertaken with extraordinary care. However well-intended, such efforts may estrange parents from their children's schools or eviscerate children's afterschool activities, such as athletics or fine arts programs. Conversely, to draw boundaries restrictively may be to create or reinforce an unfortunate sense of social or racial isolation in a portion of a community.

This evaluative dimension, community interest and government responsiveness, is related to the above-mentioned topic of organizational scale. For example, a seven-person school board in a city of a thousand is likely to hold the prospect of greater constituent responsiveness than the same number of school board members in a city of a million inhabitants. MAP consultants frequently heard the argument that school board members who lived, worked, and shopped in the same community and were on a first-name basis with most of their constituents were more likely to govern schools in a manner consistent with the desires and aspirations of their constituents. It is not possible to define that precise numeric juncture where representativeness and responsiveness are maximized. Nevertheless, it will be important to subject alternative boundary proposals to scrutiny on this dimension.

Similarly, schools, particularly elementary schools, appear to educate most effectively when there is relatively easy access for parents. Also, citizens appear more willing to vote added resources for schools if they are able to identify with them locally. These conditions suggest the advantages of having school districts aligned with communities of interest, be they neighborhoods, communities, or whatever other geographic subdivision makes sense in a particular circumstance.

However, the possible advantages of geographic cohesion must also be balanced against other criteria such as scale economies and racial composition. Some contend that a possible compromise in such situations may be a blend of large governmental units with a form of decentralized decision-making that provides for greater local control while preserving any advantages of large scale.

### *Accountability and Responsiveness*

If citizens have an opportunity to become informed regarding government operation they may take greater responsibility for ensuring that the institution is effective—that it has the resources it needs and uses effectively the resources it has. However, if an institution is too remote from those it is designed to serve, citizen loyalty is at risk. Alienated citizens may revolt by refusing to vote necessary resources. Under such conditions, the well-being of the entire polity is placed at risk. Ensuring that government units are not too large is thus important.

In addition to risking citizen alienation, overly large and remote government prevents the operation of a responsive government. Where government is remote or insensitive, citizens may perceive themselves as insignificant and their willingness to participate may be reduced. The representative nature of government is diluted in the process.

## **Financing and Facilities**

The larger the geographic area over which revenues are generated, the smaller the prospect of substantial *interdistrict* distributional inequalities. For example, extremely large school districts can dilute the prospect of narrow segments of a geographic area taking disproportionate advantage of high amounts of property valuation. Similarly, indebtedness for a capital project (e.g. constructing a school) can be a much less onerous burden if spread over a large population. The size of a school district does not necessarily, however, provide any protection against *intradistrict* inequities. In fact, such inequities are common in large districts throughout the United States.

Conversely, even if sometimes disadvantaged in terms of revenue generation, a small, cohesive community may hold a higher prospect of overseeing efficient use of resources than a large and geographically diverse community.

There are technical public financing mechanisms for ensuring that identifiable pockets of wealth (be they real property, income, or other forms of wealth) can be taxed to the advantage of a larger organization, be it a state,

county or local government. However, in designing school organization and governance alternatives, one needs to be mindful of fiscal consequences.

This issue is rendered substantially less prominent by the Nevada Plan, a set of arrangements for financing the operation of schools which is among the most equitable in its interdistrict outcomes in the nation.<sup>13</sup> In effect, pockets of poverty and wealth have little influence over an individual district's per pupil spending levels. Figure 4 displays the results of an equity analysis undertaken with Nevada's per-pupil spending levels. Here Nevada is compared with six other states in which MAP has recently undertaken school finance analyses. The comparison measure is the coefficient of variation, the most widely relied upon school finance equity measure. One can see that Nevada is a dramatically "equal" state by this measurement technique.<sup>14</sup>

**Figure 4**  
**State Interdistrict Per-Pupil Expenditure Equity Comparisons**

State	Coefficient of Variation
Nevada	0.02
Wisconsin	0.17
California	0.20
Tennessee	0.21
Virginia	0.27
Ohio	0.30
Missouri	0.32

<sup>13</sup>This could be upset by small pockets of extreme wealth because there is no recapture provision in the Nevada Plan. Wealthy school districts, such as Eureka, which receive state aid, have no limit on what they can spend.

<sup>14</sup>The coefficient of variation is determined by computing a mean expenditure for a distribution, determining the standard deviation of the distribution from the mean, and dividing the standard deviation by the mean. The figures displayed above are a pupil weighted coefficient of variation.

### *Construction Financing*

What holds for the generation and distribution of operating revenues does not, unfortunately, also apply to the financing of capital construction. On this dimension, inequalities of school district property-wealth distribution do penetrate and county districts are left to their own uneven resources to generate school construction funding. This condition can distort equality substantially. (Please see chapter 3 for a more complete discussion of alternative school construction financing strategies.)

### *State Net Costs*

The Nevada Plan is an excellent mechanism for protecting local school district per-pupil revenues from substantial consequences when alterations are made to school district boundaries. Almost regardless of local wealth levels, the Nevada plan guarantees a local school district a per-pupil minimum revenue level.

However, the Nevada Plan does not necessarily protect the state treasury. If boundary alterations create added numbers of school districts, some with substantially less access to wealth than what now exists, the state is vulnerable for higher levels of financial subsidy. This is true because newly created, wealthier districts would pay a smaller share of the overall cost.

If the Nevada Plan had "recapture" provisions, the state's fiscal exposure would be reduced. Under such provisions, the state would recapture excess per pupil revenues from one jurisdiction and recycle them to the less wealthy district. However, in the absence of such equalizing arrangements, which have proven to be politically unpopular in other states, the state is itself vulnerable to added outlays if a new redistricting plan creates any substantially greater wealth disparities than now exist.

### *Conclusion*

These five evaluative criteria—educational effectiveness, racial and ethnic composition, organizational scale, governmental responsiveness and community interests, and financing and facilities—compose, the standard against which MAP weighs reorganization options. We emphasize here again that these criteria are not mutually exclusive. On important dimensions, they are interdependent.



## CHAPTER 2

### CONSIDERING DISTRICT BOUNDARIES: DECISION MAKING OPTIONS AND PROCEDURES





## CHAPTER 2

### CONSIDERING DISTRICT BOUNDARIES: DECISION MAKING OPTIONS AND PROCEDURES

The Nevada Legislature currently maintains complete statutory authority to make decisions regarding school district boundary configurations. State policy makers may wish to retain this arrangement. Alternatively, Nevada may decide to adopt a different set of options and procedures by which district boundary decisions are considered and arrived at in the future.

This chapter displays alternatives which, in MAP's professional judgment, are available to the Legislature on this dimension. We have situated this section of the report as Chapter 2 so that readers can consider these options as they review the remainder of this document.

The Nevada Legislature has at least four options for dealing with issues relating to the manner in which school districts organize themselves. The Legislature can:

1. Make all decisions about school district organization. A variant of this option could include an automatic trigger mechanism which required certain actions to be taken when ever a threshold (for example district size) was crossed.
2. Establish a set of parameters within which other, non-legislative entities (e.g. the State Board of Education) make decisions about school district organization.
3. Establish a set of general parameters authorizing other non-legislative entities (e.g. the State Board of Education) to make judgments about whether the parameters have been met, but leaving the ultimate decision to voters themselves.
4. Establish conditions under which the governing board(s) of the territory affected could reach an agreement. Minimally, such decisions should meet certain criteria, be reviewed by a state-level entity, and be subject to appeal.

#### *Continuing The Present Arrangement*

The Legislature may decide to continue making district boundary decisions. After all, this task has not occupied an inordinate amount of legislative time in the last 40 years. However, in a context of extensive, unpredictable demographic change, the demand for changes in school district organization

will inevitably intensify. The next 40 years may witness many more demands on the Legislature to deal with real and perceived problems of school districts.

The Legislature may decide that under certain agreed-upon circumstances change is indicated, but that it should specify in advance the conditions that would trigger change. For example, the Legislature could determine that school districts should not exceed a certain size; and when any district grows larger than that size by a predetermined enrollment, the district would be required to divide into two approximately equal-size districts. Several variants on this option are possible. Rather than an immediate break-up, the specified size or other condition could trigger a referendum on whether to divide the district, or an administrative review by an objective outside agency.

### *Other Decision Making Options*

If the Legislature opts for any of the latter three approaches suggested above, several important decisions must be considered. The first is to decide on a threshold set of criteria that every school district formation proposal should meet. Examples of issues the Legislature may wish to consider as explicit threshold standards might be<sup>15</sup>:

- *Adequate and equalized per-pupil funding mechanisms*  
Nevada has an exemplary school finance model, the envy of many other states. School district organization should not be permitted to occur in a manner which would negatively impact the equalization features of the Nevada Plan, cost the state significantly more money, or financially disadvantage other school districts. Operationally, no districts should be formed which have such high local revenues that they do not participate in the Nevada Plan's equalization formulas.

In addition to equalization, adequate funding is also an important criterion. The Legislature should not permit school districts to be established if they have inadequate local resources to construct schools. There are many places in Nevada with very low assessed valuations. Because of these small tax bases, a high tax rate is required to raise sufficient revenues to build schools. School districts should not be formed if the high tax rates they would have to levy would cause them to exceed their bonding capacity.

<sup>15</sup> The list which follows includes examples of the types of criteria the state may wish to consider. This list could be easily expanded or contracted.

- *Racial and ethnic isolation*  
School districts should not be allowed to form if the result of their formation is the isolation of a racial or ethnic group. In addition to the moral and ethical considerations, there is significant legal precedent for imposing this criterion.
- *Organization patterns*  
Nevada, unlike many other states, does not permit the formation of districts which are not unified (K—12) districts. Again, Nevada is a leader among states on this issue. Establishing elementary and secondary districts invites unarticulated, fragmented educational programs. Unified school districts do not guarantee articulation, but they do facilitate it.
- *Cost to the State*  
The Legislature should adopt some acceptable limit on the amount of increase in state costs it is willing to tolerate, or it may determine that no proposal should go forward if it increases state costs. Some states limit increases in state costs to a specified percentage, say five or ten percent. Whatever the figure, the Legislature should protect itself against potential future costs by specifying in advance what it is willing to pay additionally to organize school districts.
- *Do no harm*  
School district reorganization must not materially worsen the situation for those who are not a part of the newly formed district. An organizational plan which contracts a major portion of an existing school district to either join with another district or create a wholly new district and leaves the remaining parts of the existing district impoverished and unable to provide a comprehensive program would be plainly unacceptable. Similarly, it should not be permitted, for an area which is proposing to reorganize, to have within it a disproportionate number of school buildings, making it difficult for the remaining portion of the district to house its pupils. Plans which advantage one portion of an existing district at the expense of the remainder of the district should not be permitted.

## Process

If the Legislature chooses to avoid getting involved in every decision regarding any school district reorganization plan which might be promoted, it must designate an existing agency or create a new body to review reorganization proposals and judge whether the proposals meet the basic criteria and are in the best interest of the state. In many states, the State Board of Education is charged with this responsibility. The State Board, or the

specially-appointed commission, should hold at least one public hearing on each proposal in order for citizens from the affected areas to be heard.

### **Initiation of Procedure**

In addition to the minimum standards cited above, the Legislature should specify the criteria for initiating reorganization proposals. For example, a proposal, to be eligible for consideration, might need to come from an existing school district governing board or boards, and/or from a petition containing at least a minimum number of signatures of citizens in the community in which the reorganization is proposed.

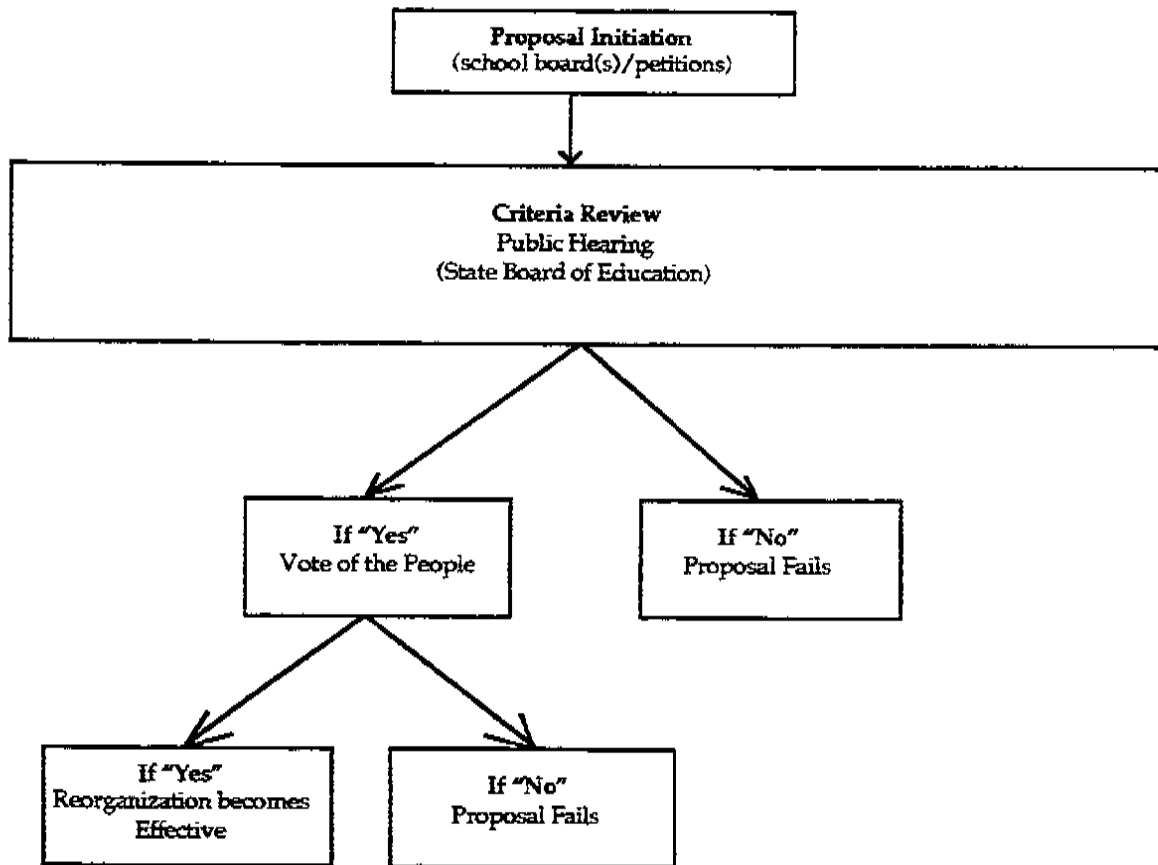
### **Participation of the General Public**

Once the board-adopted proposal or the petition is determined to have met the criteria set out by the state entity designated to review it, it could take effect. Alternatively, the proposal might only take effect, even though it met all the standards, upon the vote of the people. If the impact of reorganization on the existing district is small, the election could be limited to citizens in the area wishing to reorganize. If large, it may be appropriate to hold the election in the entire area impacted by the decision (that is, the entire district).<sup>16</sup> Once the election is held, some time should elapse before the new organization is effective in order to provide for an orderly transition. The Legislature may also wish to consider bypassing the election process in special cases, such as in those instances in which the governing board(s) of the affected district or districts unanimously agree.

Figure 5 displays the way in which district reorganization proposals might proceed.

<sup>16</sup>The same body that applies the other criteria would make the determination regarding where the election should be held.

Figure 5  
A System for Considering Reorganization Proposals



This chapter has outlined a set of options for the Nevada Legislature to consider in light of likely future pressure for school district reorganization. In effect, the chapter describes a set of working decision rules for the Legislature to contemplate.

We turn now to the consideration of a major issue confronting the State of Nevada, namely, financing school construction.



**CHAPTER 3**

**FINANCING SCHOOL CONSTRUCTION**





## CHAPTER 3

### FINANCING SCHOOL CONSTRUCTION

The cost of building and maintaining school facilities in Nevada is borne entirely by local school districts. Nevada is one of only 10 states in the nation that provides no aid for school construction purposes. In states which do provide revenue to build schools, the percentage of the state education budget dedicated to school construction reaches as high as 11 percent.<sup>17</sup> Financing school construction and maintenance constitutes a dilemma Nevada needs to resolve regardless of what other action it takes on the subject of district boundary configurations.

#### Current Financing Options

Depending on local circumstances, Nevada school districts have three options for financing construction and maintenance of school buildings: general obligation bonds, pay-as-you-go financing, and impact fees.

#### **General Obligation Bonds**

General obligation bonds are the most prevalent form of financing school construction, repair, and renovation in Nevada. These bonds are a form of borrowing, secured by the full faith and credit of the school district, and are typically repaid over 20 to 30 years. There are certain limitations on the amount of bonds a school district can issue. First, any bond issue has to be approved by the voters. Second, the total indebtedness of the district may not exceed 15 percent of the assessed valuation of property within the boundaries of the school district. All Nevada school districts, except Esmeralda, Eureka, and Mineral, currently have outstanding general obligation bonds.

#### **Pay-As-You-Go**

Nevada law authorizes, for districts unable or unwilling to pass a bond issue, a "pay-as-you-go" tax to accumulate funds to build, remodel, or repair school facilities. Voters must authorize the levy of this tax. Voter approval is required a second time if the funds collected for replacement of a capital asset are to be expended for constructing a new building. Pay-as-you-go taxes are

<sup>17</sup>This is the amount provided in California.

limited to 75 cents per \$100 of assessed valuation in school districts with fewer than 25,000 students and to 50 cents in districts where enrollment exceeds 25,000. Elko, Lander, and White Pine School Districts currently levy pay-as-you-go taxes.

### Impact fees

School districts in counties with fewer than 35,000 residents can levy developer impact fees of up to \$1,000 per dwelling of new residential construction, including mobile home sites. The Board of County Commissioners must approve such fees which can be levied only in the area served by the school buildings constructed or enlarged. Douglas and Storey Counties currently are the only Nevada school districts utilizing these fees.<sup>18</sup>

### Concerns About Financing Capital Improvements

Elsewhere in this report MAP has identified financing of capital projects as a significant problem for many school districts. Two concerns were raised. First, there is the obvious inequality of school facilities among the various counties. Second, there is the sheer magnitude of demand for school construction in some counties, particularly Clark and Elko.

In our visits to counties, MAP consultants were struck by the disparate quality of school buildings among school districts. The differences between Goldfield Elementary in Esmeralda County and Eureka Elementary, or Mineral County High and Cimarron-Memorial High (Clark County) are stark and profound.

With few exceptions, the State ensures that the funds for operating an education program are substantially equal among districts. (See MAP's description of the Nevada Plan, included as Appendix B to this report.) Differences in funding, for the most part, reflect differences in local circumstances, such as unavoidable small schools, extensive transportation, and large populations of students with special needs. The Nevada Plan adjusts for differences in assessed value and sales tax yield on the operating side of the budget. No such correction for assessed value differences is made for school construction.

<sup>18</sup>The Douglas County School District levies a \$2,400 fee per unit for new subdivisions. The statutory authority of the school district to levy this additional fee is currently being challenged by a builder. Although the district court ruled in favor of the school district, the builder has appealed the case to the State Supreme Court. A decision is expected this year. All money generated from this additional fee is being held pending the outcome of the suit. The school district anticipates \$1.6 million will be received from this source by the end of fiscal year 1995-96. Thanks to Henry Etchemendy for pointing out that Storey County utilizes a residential construction tax of \$500 per unit.

Under current law, both students and taxpayers receive unequal treatment. Some students attend classes in impressive facilities designed to accommodate state-of-the-art educational programs. Other students attend classes in obsolete structures that should have been demolished long ago. The primary determinant of the type of facility in which a student attends school is the county, and in some cases, the community, in which the student resides.

Because property values vary significantly among counties, some property owners are taxed at a much higher rate to raise the same amount of money as is a similarly situated property owner in another county. Leaving aside for the moment Eureka County, which has the highest assessed value per pupil, there are still significant disparities among the rest of the counties. These disparities sometimes result in requiring tax rates in one county to be three or four times the rate in another county to build the same type of school facility on identically valued property.

Courts across the country have held consistently that the wealth-based resources available to educate a child should not depend on where he or she lives, and unwarranted differences have been judged to be unconstitutional. Plaintiffs have argued successfully that similar tax rates should yield similar revenue per pupil. In most of these cases, only funding for on going operations was addressed. However, recent cases in Arizona, Texas, and Ohio have attacked unequal school facilities. The plaintiffs' arguments in these cases have followed the same logic as the earlier cases; and there is some indication that the courts are taking these arguments seriously.<sup>19</sup> School finance experts predict similar suits in other states where capital improvements are predominately the responsibility of local school districts and where there are significant differences in the wealth of local districts.

Clearly, not all of the differences in facilities are attributable to differences in assessed valuation. For a variety of reasons, local communities value schools differently. Some counties may have the wherewithal to support school construction but cannot gain voter approval. Traditionally, the strongest supporters for new school facilities are parents with children in school. As the population ages and as a smaller percentage of citizens have children currently in school, it becomes increasingly difficult to successfully provide for school construction, especially if the total burden for those facilities falls on the property tax.

The second issue related to capital projects in school districts is the need to build new schools for the rapidly growing enrollments in several counties.

<sup>19</sup>Crampton, F.E. and Terry N Whitney, National Conference of State Legislatures, "Equity and Funding of School Facilities: Are States at Risk?" February, 1995.

Even in counties where enrollment is stable or declining, there is an obvious need for extensive renovation or replacement of obsolete facilities. It is difficult to accurately estimate the total cost of construction and necessary renovation, especially the latter. A sense of the magnitude can be gained by examining the capital needs in selected counties.

Clark County schools staff project capital improvement costs of \$634 million for 20 new schools and renovation of existing schools by the year 2001.<sup>20</sup> The Washoe County School District Governing Board will ask voters to approve a \$196 million bond issue for the same period. Nye County School District has identified capital needs of more than \$54 million, mostly for renovation or expansion of existing facilities. Elko staff projects the need for seven new schools and renovations at an estimated cost of approximately \$63 million.<sup>21</sup> Capitol needs for just these four counties approaches \$240 million per *year* through the turn of the century.

### Options For Addressing Concerns

Regardless of how the Legislature chooses to address these concerns, it would be prudent to determine, with far greater accuracy, the extent of the problem. The National Conference of State Legislatures recommends a statewide assessment of the condition of existing school facilities and a statewide projection of new school construction needs.<sup>22</sup> The Nevada Department of Education is currently in the process of conducting such a review. Given the condition of many of the school facilities in Nevada, a long-range plan to address this issue is advisable. At the very least, school districts should annually report information regarding the condition of existing school facilities and the need for new facilities in a prescribed format along with the currently required financial reports, so that the Legislature will be kept appraised of the nature and scope of the problem.

Because of the serious nature of this problem and the potential for legal action against the state, MAP outlines in the next section some alternative capital outlay provisions for consideration by the Legislature.

<sup>20</sup>These data, which are preliminary and may be revised after governing-board review, were obtained from personal conversations with Fred Smith, Clark County School District Facilities and Transportation Division.

<sup>21</sup>These data, which are preliminary and subject to change after governing-board review, were obtained from conversations with Marcia Bandera, Superintendent, Elko County School District.

<sup>22</sup>Crampton, *op cit*.

- *Full State Assumption*

If Nevada were to assume all costs for construction and maintenance of school facilities on a pay-as-you-go basis, a substantial increase in the education budget would be required. The 1995—96 state education budget was \$1.18 billion. Assuming that the capital needs cited in this chapter are typical, and that the needs of the remaining counties are proportionate to their enrollments, a full state assumption program would cost the state approximately \$275 million per year.

This 23.3 percent increase in the state education budget could be financed by a 1.25 cent statewide sales tax, a statewide property tax of about 87 cents, an increase of 4 percent in gaming taxes, or some combination of all sources.<sup>23</sup> This represents a significant increase in the state's education budget and, perhaps more significantly, a large bite for the taxpayers to swallow.

An alternative to pay-as-you-go is for the state to issue general obligation bonds. This course may be more attractive than pay-as-you-go if Nevada anticipates a leveling of enrollment increases and a consequent decrease in the need for new construction. Such a slackening does not seem likely for the next several years. If the state is required frequently to seek voter approval and to regularly increase outstanding debt, the advantages of spreading the cost of construction over 20 or more years diminishes. Interest payments significantly increase the cost of projects, and too much debt will lower the credit rating of the state, thereby increasing the cost of borrowing for all capital projects.

Another barrier to the state issuance of bonds for this purpose is the Nevada Constitution, which limits general obligation debt to two percent of the state's assessed valuation. The estimated bonded debt capacity remaining on December 1, 1995 was \$172.9 million.<sup>24</sup>

- *State/ Local Partnership*

A reasonable alternative to the status quo or to the state assuming full responsibility for capital outlays is for the state and local districts to share in school maintenance and construction costs. This approach has a number of advantages. It reaffirms the state's commitment to equity, while recognizing the essential role local citizens must play in decisions affecting the children of their community. It spreads the burden of financing capital projects over all the taxpayers, all of whom benefit from a well-educated citizenry. At the same

<sup>23</sup> Estimates provided by Jean Botts, Nevada Legislative Counsel Bureau.

<sup>24</sup> Sturm, H. Pepper, Nevada Legislative Counsel Bureau, memorandum, March 1, 1996.

time it does not remove local responsibility for schools, because it would require local taxing effort as a condition of state assistance.

One possible way of configuring such a state/local relationship is to share the responsibility for school housing among three major groups, each with a tangible interest in high quality schools. The three groups are the citizens of the state as a whole, local property taxpayers, and developers. An appropriate share for each partner would need to be established. Each of the partners would be advantaged because as a result of the partnership, additional schools would be built and existing schools would be improved. The state's share of the partnership could come from either an annual appropriation for school construction and renovation, or a statewide general obligation bond, or both. Local property taxpayers, who now shoulder virtually the entire burden, would know that there is some relief coming from their partners. Developers would know that there would be a higher likelihood of schools being built and improved and thus the property in and around the development would grow in value.

In order to equalize local capacity for these funds, the state's share for any given project could be inversely proportional to the district's assessed value per pupil. In other words, every local community would have to make a contribution (none would receive 100 percent state funding), and the lower the assessed value the higher percentage of support the state would contribute. If, for example, the legislature determined that the state should contribute on average 30 percent for each project, a low-wealth district would receive for its state share an amount greater than 30 percent. If, on the other hand, a district had higher-than-average wealth per pupil, it would receive less than 30 percent. Districts with very high assessed value per pupil might receive no additional support from the state. Having the state play an equalizing role in this manner should well equip Nevada for any prospective legal challenge.

In defining a role for the state in capital construction, several other considerations need to be kept in mind. Some mechanism must be in place to determine a set of criteria which prioritizes needs of counties, communities, and projects. In some states, that function is performed by the Legislature in its budget process; in others, by the state department of education; and in still others, by a separate entity appointed specifically for this purpose. Not every request from schools will be of equal merit and a system must be in place to make judgments about the appropriate priorities.

In addition, some statewide standards for school facilities, or least for state-financed new construction, need to be established. The State should have some, at least minimal, guarantees that its funds are being spent appropriately and that all children are housed adequately. The option should also be available for districts who prefer not to be involved with the state in school

construction to go it alone and continue to fund their building costs from the local property tax.

The third partner in this shared responsibility model is the community of developers. This is a potential revenue source largely untapped in Nevada.

There may be no other economic activity that has a more direct impact on the need for school facilities than the construction of residential units. Impact fees tend to be shifted to home-buyers in the form of higher purchase prices which helps defray the marginal cost of the added enrollment the home-buyers represent. Current residents have already paid for the existing facilities and will pay again for the newcomers. Impact fees attenuate the "penalty" that long-time residents pay for new residential development. Moreover, developers have an economic interest in the quality of schools. There is a strong correlation between residential property values and perceptions of school quality. Having said that, it is important that developers be protected against fees which are too high. They ought not carry an undue burden for school construction.

If the Legislature agrees that development fees should provide a portion of the solution to the school construction financing problem, impact fees should be available to all counties, irrespective of size. Those districts most affected by rapid growth are currently prohibited from using them. Secondly, consideration might also be given to allowing the areas in the county in which the fees are to be imposed to vote on the imposition of the fees, rather than requiring approval of the county commissioners.

In the next section, we provide a specific example of how such a formula might work.

### *School Construction Funding: An Example*

In order to bring greater specificity to the discussion of the concept of shared responsibility for school construction, MAP provides the following example. It is meant to be illustrative of how such a concept can be made operational. Let us assume that the Legislature decides that it has at least partial responsibility for adequate provision of school facilities in the state. Let us also assume that the Legislature adopts the notion of "shared responsibility" and views developers and school districts as partners in this enterprise. Let us further assume that the Legislature, which is noted for the Nevada Plan's equalization efforts for operational expenditures, adopts the same principles for school construction. A resulting formula might consist of the following provisions.

First, the Legislature would need to establish its share of the shared responsibility. For purposes of this example, let us assume that that

percentage share equals 30 percent. The Legislature would need to reallocate existing resources, raise taxes or fees, or issue statewide general obligation bonds specifically for the purpose of school construction in order to establish a fund to be utilized to match local revenue sources for the costs of construction.

Secondly, the Legislature would need to establish what are acceptable sources of the "fair share" of the responsibility of its other partners in this effort. There are any number of ways to do this. The Legislature could restrict local revenue sources to those currently in law or they could expand to include other sources, such as developer fees where they are not currently available. The legislature could authorize local school boards to levy such developer fees, within specific limits that appropriately reflect the developer's fair share of the cost of housing new students, without imposing fees so high that they discourage development. Since development is most likely to occur in districts with rapid growth, including developer fees in the calculation of the local contribution seems reasonable.

Third, provision must be made to "equalize" the burden across local school districts. Absent such a provision, high-assessed-value districts would enjoy the same huge advantage over their lower-assessed-value counterparts as is now the case. Consistency with the Nevada Plan requires a formula which is largely independent of the wealth of the district seeking state funds. One way to accomplish this is to establish an inverse relationship between a district's assessed value per pupil and the percentage contribution the state is required to make. Put differently, the average assessed value per pupil district in the state would contribute 70% of the total required expenditure. Districts with higher than average assessed values would contribute a higher percentage and districts with lower average assessed values would contribute lower percentages. Districts which are outside the equalization provisions of the Nevada Plan would contribute the full amount, and would not be eligible for any state support for capital outlay purposes. Some minimum should be required for every district no matter how low their assessed value, so that every district has at least some stake in the outcome. A reasonable lower limit might be 20%.

Let us now turn to specific examples to illustrate how the proposal would work. Let us assume that the average assessed value per pupil in the state equals \$120,000. Let us also assume that each of three districts has identical needs of \$10,000,000 for equally high priority school facility needs.<sup>25</sup>

<sup>25</sup> It is important to note that if the state is to contribute to school construction costs, minimum standards for school construction, as well as priorities for funding, need to be adopted. Priorities are particularly important. As an example, the state should replace classrooms which are hazardous before building new gymnasiums.



For a district which is at the average assessed value per student, the state's share is \$3,000,000 and the local share is \$7,000,000, which can be generated by any combination of district and developer fee revenues.

A district which has such high assessed value per pupil that it is not eligible for equalization money would be required to raise the entire \$10,000,000 locally. A district with \$180,000 in assessed value (50 percent higher than the state average) would be required to pay 85 percent of the total, or \$8,500,000. At the other extreme, even the lowest-assessed-value-per-pupil district would be forced to raise at least \$2,000,000 to qualify for the state match. Finally, a district with an assessed value per pupil of \$60,000 (half the state average) would be required to contribute 35 percent of the total cost of the project. In this way, district payments would take into account a district's ability to pay.

In the next section, we examine a sample of school construction mechanisms in other states.

### *Financing School Construction in Other States*

All but ten states have assumed some responsibility for financing school construction. The level of that commitment varies significantly, however. In 1994, Alaska, the state contributing the most, spent \$2,254 per pupil<sup>26</sup> and Montana spent \$6, the least. The median state aid for school construction was \$104 per pupil. If Nevada were to provide the average amount of assistance for school district capital improvements, the annual cost would be \$27,564,264 in 1994 dollars. Full state assumption (\$275 million per year), described above, would cost approximately \$1,038 per pupil.

States employ a variety of mechanisms for determining the amount of funding for specific local projects. In 24 states, state aid is provided in an inverse relationship to the wealth of the local district. In six states, local districts receive a flat grant, and in two states, the state pays the full cost of construction, under certain conditions. In every case MAP examined, state approval was required of proposed projects and some state agency established priorities for the order in which projects would be funded. In some states, the process was complex and highly bureaucratic; in others, straightforward with a minimum of state control. Following are brief summaries of how other states fund local school district capital projects. They are offered merely as illustrations of the range and diversity of procedures for addressing this issue.

<sup>26</sup>Per-pupil expenditures cited for other states were obtained from the United States General Accounting Office.

## Georgia

Georgia provides funding for between 75 and 90 percent of the cost of local capital outlays. Every school district earns an annual entitlement under this program, which can be used for immediate needs or can accumulate.

Although the formula for determining local participation is based, in part, on local wealth, the state pays no less than 75 percent of the cost of all capital outlays.<sup>27</sup> Georgia spent \$123 per pupil in 1994.

## Rhode Island

Rhode Island provides an annual entitlement to defray the cost of maintenance, renovation, and new construction for which local districts have issued bonds. The minimum state participation is 30 percent and the average is 38 percent, depending on the wealth of the district.<sup>28</sup> Capital improvement fund expenditures in 1994 were \$117 per pupil.

## Massachusetts

Massachusetts reimburses local school districts for 50—90 percent of the total debt service of all “major” capital projects, including new construction, additions, renovations, and major component repairs. The local district must first authorize borrowing or funding for the entire project and make application to the State Board of Education. Projects are authorized for reimbursement according to priorities annually established by the State Board.<sup>29</sup> In 1994, Massachusetts spent an average of \$193 per pupil on capital projects.

## Alaska

Alaska provides grants for local capital outlays that cover between 65 and 95 percent of the total cost of the project, depending on the assessed valuation of property in the local school district. All projects require prior approval of the State Board of Education and are funded according to priorities set by that body.<sup>30</sup> Alaska’s expenditures for capital outlays in local school districts in 1994 were \$2,254 per pupil.

<sup>27</sup> Georgia State Department of Education, Georgia’s Capital Outlay Program for Public Schools, no date.

<sup>28</sup> Rhode Island Department of Education, Description of State Aid Programs, October, 1995.

<sup>29</sup> Massachusetts Department of Education, School Building Assistance Fact Sheet, no date.

<sup>30</sup> Alaska Department of Education, Construction, Rehabilitation, and Improvement of Schools and Education Related Facilities, no date.

## California

California has a complex system of school construction involving the California State Department of Education, the State Architect, the State Allocation Board, and other state agencies, all with specific and defined roles. School districts are authorized to impose limited developer fees if they can validate the impact caused by the development. They may also issue General Obligation (G.O.) Bonds, but these require a two-thirds majority vote of the public. The State also has a lease-purchase program, which provides state assistance from state-issued G.O. bonds for growth districts. In order to be in the "priority one" category, districts must be on year-round programs and must locally finance 50 percent of the project cost. Projects must be approved for funding by the State Allocation Board.<sup>31</sup>

### A Means for Proceeding

If Nevada wishes a means by which future school construction could be financed, drawing upon both state and local resources, and leaving open an option for greater reliance upon "developer fees," consideration could be given to a plan such as the following:

*Credit Enhancement.* The State assuredly is among the Nevada public-sector agencies with the most secure credit rating. One means for taking advantage of this strength, and simultaneously drawing upon locally generated revenues for school construction, is to establish a state school construction financing credit enhancement authority. This agency, either newly enacted or adapted from existing authority, could be authorized to sell state bonds, up to a specified ceiling amount. Revenues from this source could then be lent to local school districts for school construction.

*State Allocation Board.* In addition to a credit-enhancing component, the state would need to designate an administrative body capable of reviewing local school district facility construction funding applications. This agency would then determine priorities for state bond revenues.

*Local School District Loans.* Nevada's local school districts, once having received school construction funding, would repay such loans through operating expenses. The advantage of this mechanism is that the existing "Nevada Plan" substantially equalizes school district revenue raising capacity. Hence, by paying construction loans through operating revenues, local school district funding ability is equalized.

*Decision-Making Discretion.* Because the loan fund would be repaid from operating revenue, local school districts need not obtain any greater

<sup>31</sup> Californians for Adequate School Housing, "How Schools are Built in California."

permission than approval from the local school board. Should it so desire, the legislature in its wisdom could specify that such loan applications necessitated a two-thirds local school board vote or some other super-majority.

*Local District Option.* Any local district desiring to continue to self-finance school construction would be free to do so. The state school construction loan fund would be available only for districts which voluntarily chose to join in and comply with such a mechanism.

*State Assurance.* The state would continue to retain overall fiscal control by authorizing the level of bonds to be sold, school districts are eligible to receive, and which are actually granted, construction loans, and by overseeing, as is now the case, local school district revenue.

*Investment Opportunity.* Such a state loan fund arrangement would provide assurance to investors. The added stability would likely render the bonds attractive to pension funds such as those operated on behalf of teachers and other professional educators.

### Concluding Remarks

This chapter has explored Nevada's current system for funding school maintenance and construction and has offered a number of options and examples regarding alternative funding mechanisms.

MAP is not recommending one specific approach for Nevada. However, MAP is convinced that the State must seriously consider a course of action to modify current procedures for financing maintenance and construction of school facilities.

The next chapter outlines key technical issues which must be considered in advance of any district reorganization effort.

**CHAPTER 4**

**KEY TECHNICAL REORGANIZATION**  
**ISSUES TO CONSIDER**



## CHAPTER 4

### KEY TECHNICAL REORGANIZATION ISSUES TO CONSIDER

Policy makers need to be mindful of a set of key technical issues that likely will arise as the result of any reorganization or boundary-change process. Most school district reorganization efforts in this nation have concentrated on reducing the number of districts. Combining districts produces some interesting organizational dilemmas. On the other hand, it is more difficult to break existing districts into smaller agencies, or to split off one portion of an existing district and attach it to another, than it is to combine districts into larger units. Procedures addressing issues attendant to district reorganization must be adopted *prior* to initiating any reorganization effort.

The issues MAP illustrates in this chapter pertain specifically to considerations of employees and administrative structures, local policy-making arrangements (e.g., school boards), revenue and debt streams of existing district configurations, and property ownership.

#### *Employee Assignment*

Whenever reorganization occurs, current employees need to be appropriately assigned. A general rule should be that employees are relatively unharmed by reorganization. Laws or regulations which allow continuity and provide minimum disruption of service are essential. We recommend that if the Legislature decides to alter the way in which school districts are formally organized, it give consideration to the following proposed guidelines to cover the most predictable situations.

#### **Teachers, Other Certificated Employees, and Classified Employees**

When districts are combined, all employees normally become employees of the newly-formed district. In the case of the division of a district into two or more parts, employees could be assigned to the district which includes the territory to which they are currently assigned. For example, it would be logical to assign a teacher, principal, or custodian to the newly-formed district in which his or her current school is located. In some states, tenured teachers are allowed to choose (usually on the basis of seniority and credential qualifications) which of the new districts they wish to join.

## District Central Office Employees

The treatment of district central office employees provides a set of knotty problems which need to be resolved prior to the effective date of the reorganization, especially in any instance in which a district is divided into multiple parts. Again, most reorganization proposals historically have created larger districts. Thus, the relevant laws in most states are designed to treat reductions, rather than increases, in the number of districts. When districts combine, all employees become employees of the new district. If, by combining districts, fewer employees are required, continuation of employment is usually determined on the basis of seniority and expertise.

In those cases in which districts divide and existing district employees need to be distributed across a number of districts, multiple options are available, ranging from allowing employees to choose to which of the new districts they wish to be assigned, to a system in which the new districts are allowed to hire from the pool of existing employees, in a manner not unlike the National Football League player draft. Current Nevada laws providing for the consolidation of other government services should be examined as possible models for school district reorganizations. Whatever the approach, having agreed-upon rules in place prior to reorganization is essential.

## District Superintendents

In cases in which districts are combined, the state has several alternatives, ranging from honoring the existing contracts of the superintendents of the component districts, to allowing a one-or two-year period in which all superintendents are still employed, to allowing the board of the newly formed district to select its superintendent and release or return to a lower position in the organization those not selected.

### *Salaries, Benefits, and Employment Rights*

One of the complicating issues relating to district consolidation and division is how to deal with the issues of salaries, benefits, and employment rights. Normally, school districts are required to maintain a uniform salary schedule. When districts divide, employees since they all come from the same district, will be on the same salary and benefit schedule at the time of reorganization. On the other hand, when school districts combine, employees come to the new district from different salary schedules which will require standardization. This can be done over time, but usually involves the leveling up of existing salaries and benefits.



As a general principle, employees should not lose employment rights as a result of reorganization. Employees should be allowed accrued benefits, sick leave, retirement credit, etc., and the cost of these benefits should become the obligation of the district to which the employee is assigned. Discussion about the appropriate division of assets and liabilities should include the topic of accrued sick leave, retirement credit, health care benefits, and the like.

### Layoffs

In a case in which fewer teachers or other employees are needed in a newly combined district than were needed in the antecedent districts, some method of layoff may be necessary. One option would be to allow that determination to be made by the locally elected school board. Another is for the state to specify in advance the criteria, usually seniority and expertise, by which the order of layoff will be determined.

The possibility of layoff tends to be one of the most unsettling and traumatic results of reorganization proposals. In few cases would a reorganization cause a surplus of teachers in the short run. Initially, enrollments would be unchanged, and unless class sizes were increased significantly, the same number of teachers would be employed. Every effort should be made by the Legislature to adopt clear and precise procedures so that employees will know, in advance, the options available to them.

### Governing Boards

When new districts are formed, whether they are combined or divided, new governing boards need to be selected. In cases in which school district organization is determined by the voters, the new governing board is usually elected at the same election. If no such provision is made, the election of the new board usually takes place at the first regular election following passage of the proposal. In many states, lead time is permitted between the decision to reorganize and the actual effective date of the new district. This allows the district to have adequate planning time prior to actual operation. In the meantime, the existing districts continue to operate.

### Operating Revenue

Any adjustments to district revenues must be spelled out prior to reorganization. The existence of the highly equalizing features of the Nevada Plan make this less problematic in this state than in many others, but it is still an issue that needs careful attention. One alternative would be to require that

the existing school finance formula be applied to each of the new districts. Depending on the situation, this could have serious implications for the Legislature, in that the application of the formula may result in substantial new costs for the state or other districts where there is significant inequality of wealth per student among the new districts. If, for example, a high-wealth portion of an existing district wishes to split off from the rest of a district which contains less valuable property, the local money from the high-wealth portion, which was formerly shared across the whole district, would no longer be available. Under the Nevada Plan, this revenue would need to be replaced by additional state revenues or by revenues from other districts across the state.

Another alternative, in cases in which one or more districts are joined, is to determine a new per-pupil revenue amount by simply blending the revenues of the districts and dividing by the number of students in the new district to determine a base. In cases in which districts are divided into two or more parts, each of the new districts would begin with the same revenues per student as were available to the old district.

The most important aspects of school finance in Nevada are the property tax revenues and sales tax revenues available within each district. Normally, these local sources of revenue are assigned to the area in which the property lies, or where the point of sale occurs. Because of the emphasis on equalization in the state's school finance formula, the Legislature may wish to consider maintaining the existing county lines for property and sales tax purposes and reallocating the receipts back to the new districts on a pro-rata per pupil basis.

A major barrier to equitable treatment of school districts when one considers breaking existing county districts into smaller districts is the treatment of sales tax revenue. This becomes especially critical when considering the breakup of Clark County. MAP suggests that consideration be given to the continued collection of sales tax revenue on a county-wide basis and the parcelling back of those funds on a per-pupil basis within each county. As a general rule, sales tax revenue is much more volatile than property tax revenue and creating multiple smaller districts with high variable and volatile sales tax revenues could lead to the possibility of substantially increasing the number of districts falling outside the Nevada Plan equalization provisions. Continuing to collect the LSST on a county-wide basis and redistributing the revenue on a per-pupil basis would guard against that occurrence.

### *Bonded Indebtedness*

Parceling out bonded indebtedness is another complex process and, again, one that must be spelled out clearly in statute. Disputes regarding bonded

indebtedness are frequent in school district reorganizations. In cases in which one or more districts merge, the bonded indebtedness of the prior district is normally assumed by all the citizens of the newly formed district.

Alternatively, it may be more equitable to hold taxpayers from the antecedent territories harmless by allowing both to retain the same tax burden as if there had been no change in boundaries, until such time as the new district incurs debt or the original district(s) retires the debt.

In cases in which districts are divided, or in which territory from one district is assigned to a new district, the bonded indebtedness obligations remain with the territory. In Nevada, because district boundaries and county boundaries are coterminous, the result would be that existing bonded indebtedness would continue to be calculated on a county-by-county basis. While this policy is good for bond holders, it may create an inequitable situation. For example, in the case in which a school is located in one part of the county, but bonds to build that school were levied in the whole county, if that portion of the county in which the school is located either establishes its own district or is merged with another county or portion of a county, some taxpayers would be paying for a building that is no longer in their district. State law may specify protocols for resolving matters such as these, or may establish procedures for adjudicating differences before any reorganization occurs.

In cases involving unsold bonds, the bonds usually continue to be authorized for the purposes for which they were issued. In the case of merged districts, the bond proceeds become the property of the newly formed district. In cases in which the district or districts are divided, or become attached to a different district, the pro-rata share (usually based on the pro rata share of assessed value) becomes the property of the newly formed district. Again, equity requires that these decisions be coupled with decisions regarding the division of property. Regardless of the methodology adopted for resolving division of debt, the underlying principle should be that no district receives a windfall at the expense of another.

### *Division of Property*

The appropriate division of school district property is also a thorny issue which must be addressed in the reorganization process. One way to simplify the issue is to provide that schools and the assets that exist on school grounds become the property of the district in which they are located. Property located in a central, non-school-site location is a more complicated matter. One common way to resolve this dilemma of ownership is to ascertain the value of the existing district's property and then provide for a method of dividing the assets and liabilities on a per-student basis. These property divisions can become quite acrimonious. Thus, the Legislature would be well advised to have, as part of the plan for reorganization, provisions which specify the

method for division of property prior to the actual reorganization. After the reorganization, there is little incentive for the parties to enter into reasonable agreements. It might also be prudent to spell out in statute a method for dispute resolution. As with debt, division of assets should proceed under the assumption that neither party receive a windfall at the expense of the other.

### Transition

During the transitional period from one form of organization to another, it is incumbent that the legislature have in place appropriate procedural steps. MAP suggests a four-step plan, designed to facilitate the change.

First, the legislature must adopt clear statutory language which resolves the key issues MAP has outlined in the above sections. The statutes must, at a minimum, cover:

- Rights and responsibilities of employees
- Salaries and Benefits
- Layoffs
- Revenue
- Bonded Indebtedness
- Division of Property

Second, a transition period needs to be established in statute, starting from the time the decision has been made to reorganize and lasting until the time the newly established districts are operational for all purposes. During this transitional period, existing districts would continue to operate and the new districts would begin to organize. MAP recommends the transition period be somewhere between six and 18 months. One way to provide statutorily for the time of the transition is to require that any new district will become fully operational on the first day of the new fiscal year in the next calendar year after the decision to reorganize has been made. Such a provision will allow at least six months and no longer than 18 months lead time. During this period, new school district governing boards can take office, new staff can be hired, lay offs (if necessary) can take place, facility planning can occur, disputes can be resolved, and new boards can begin the planning process for their new responsibilities. Absent some kind of phased-in transitional process, districts are faced suddenly with all kinds of first day logistical problems and cannot focus on planning efforts.

The third step is for the legislature to put into place a method for resolving the disputes that are bound to occur. No matter how carefully crafted the legislation called for in step one, not all issues will be covered. Therefore, MAP recommends some form of binding arbitration to resolve disputes between districts, or between districts and employees.

Division of property may be a particularly contentious issue. When boundary changes occur in an area where some facilities are newer or particularly desirable because of design or some other feature, it is important that there be in place a procedure where an objective third party can assess the relative value of each asset. Where it is physically impossible to divide assets equally, the difference should be compensated in cash. For example, many of the school buildings in the urban core of Clark County are older and require costly renovations to make them comparable to newer buildings in the newer areas of the County. Equity would dictate that any newly created districts that inherit the older buildings be compensated with funding to make the renovations necessary to make their schools comparable to those of their neighbors.

The fourth step in the transition process is to require that before a district can begin to operate it must display to the satisfaction of the legislature, the State Board of Education, or some other body designated by the legislature, that it meets certain minimum requirements. The Legislature can be as specific or as general as the Legislature wishes, but boards need to be able to provide evidence that they are ready to begin operation. Requiring, for example, that districts be able to display their plans for hiring sufficient personnel and providing adequate facilities, is a reasonable, non-intrusive request that would give some assurance to the legislature that the district was ready to assume responsibility for the new district. At the same time, such a requirement provides incentives for districts to engage in more effective planning efforts.

### *Concluding Remarks*

In this chapter, MAP has presented some of the procedural and statutory issues which must be addressed prior to district reorganization, and has offered some potential solutions. It should be recognized that, in actual practice, a much greater level of detail is required than can be provided here. We emphasize, however, that the Legislature must anticipate as many of these issues as possible, and provide clear procedures for their orderly resolution.

The next chapter probes the issue of charter schools as a means of expanding the range of reorganization options available to the Legislature.



**CHAPTER 5**

**CONSIDERING THE OPTION OF CHARTER SCHOOLS**





## CHAPTER 5<sup>32</sup>

### CONSIDERING THE OPTION OF CHARTER SCHOOLS

Advocates of charter schools assert that this reform permits “bottom-up,” school-based organization and accountability. Opponents express concern regarding matters such as equitable access for all students to charter school programs.

Charter schools remain controversial, but their popularity continues to grow. As of May 1996, 22 states had enacted statutes authorizing the establishment of charter schools.

MAP presents in this chapter an overview of key issues relating to charter schools. This subject is presented as a component of this larger Nevada school organization study so that policy-makers have an opportunity to consider charter schools as an additional education organization option. We emphasize here that should the Legislature entertain a charter school statute, care should be taken to ensure that an appropriate set of criteria, or decision rules, is established so that the merits of individual charter proposals can be appraised.

#### *What Are Charter Schools?*

There are several definitions of charter schools. The most common, and the original, definition is the following:

*“A charter school is an autonomous, results-oriented, publicly-funded school of choice that is designed and run by teachers or others under contract with a public sponsor.”*

Charter school mechanisms vary from state to state. However, several common features generally characterize these entities:

- *Operator:* Teachers, parents, non-profit organizations (such as museums or social service agencies), businesses, or other individuals or groups may develop an application to start a charter school. The application describes the school’s educational program, the expected student performance levels, the methods by which that performance will be measured, the

<sup>32</sup> Some parts of this section are derived from “Charter Schools: Legislation and results after four years”, Indiana Education Policy Center; University of Indiana, Bloomington, Indiana. Permission granted by authors.

governance structure of the school, and so forth. The application may be for a brand new school or for the conversion of an existing school.

- *Sponsor*: The operators seek a sponsor for their charter school. The sponsor may be a local school board, state board of education, state superintendent of public instruction, a university, or community college, or some other public entity. The function of the sponsor is, first, to determine whether or not the school is worth approving and, second, to make sure approved schools abide by their charters.
- *Charter*: If the sponsor approves the school, a contract, or charter, is drawn up committing the operators to the terms described in the application. Charters are generally granted for a period of three to five years. If a school fails to abide by the terms set forth in the charter, particularly the provisions on student performance, the sponsor may revoke the charter.
- *Choice*: No student, or teacher, is assigned by a district to a charter school. Rather, parents choose to enroll their children in these schools, and teachers elect to teach there. As is common with school choice plans, per pupil funding follows students to the charter school.
- *Exemptions*: In return for agreeing to be held accountable for student performance, charter schools are exempt from collective bargaining agreements, district policies, and most or all state education laws and regulations (but not from health and safety codes, fiscal review standards, and the like). They are free to manage their own budgets, hire and fire staff, set salary levels, sue and be sued, and undertake a variety of decisions and entrepreneurial activities that conventional public schools cannot.
- *Public Education*: Like regular public schools, charter schools must accept all students who enroll. If there are more applicants than spaces, students are selected by lot. Charter schools cannot charge tuition or discriminate against any student because of race, gender, or disability. Finally, they must be nonsectarian. If an existing private school becomes a charter school, it must agree to abide by these long-standing principles of public education.

The dual form of accountability is one of the most appealing aspects of charter schools. On the one hand, a charter school is directly accountable to customers, that is, to students and parents, who may "vote with their feet" if they are not satisfied. On the other hand, a charter school is indirectly accountable to the public as a whole through the public's representatives (either elected or appointed officials). These representatives may close the school if it is not fulfilling the terms of its charter, no matter how satisfied students and parents are.

## *The Pros and Cons of Charter Schools*

What are the potential advantages and disadvantages of charter schools?

Advocates say such schools will:

- Curtail bureaucracy, allowing operators and teachers to concentrate on producing results rather than complying with regulations;
- Hold operators and teachers accountable for student performance; provide concrete incentives to school personnel by linking improved student achievement to the survival of their jobs and of the school itself;
- Facilitate innovation in areas such as organizational structure, scheduling, staffing, curriculum and instruction, and assessment;
- Increase parent involvement;
- Expand the range of educational options for students;
- Expand the range of professional options for teachers; and,
- Provide both competition and models that may spark districts to improve their own schools.

Opponents of this education reform, on the other hand, worry that charter schools will undermine public education. Among the issues they raise:

- Charter schools will siphon badly needed funds from public school systems.
- Charter schools will undermine the hard-won collective bargaining and tenure rights of teachers.
- Whatever the original intent of the laws, charter schools will become elite, pseudo-private academies supported by public funds, increasing the segregation of schools by race and class.
- Charter schools are simply another attempt by private school advocates to gain a public subsidy for private education.
- Innovation is already abundant in public schools. Charter schools will do little more than duplicate current efforts.
- Charter schools are not the only schools that would benefit from fewer regulations. All public schools should have the same opportunities.

- Charter schools are touted as a revenue-neutral reform, but if new schools are established, or if formerly private schools convert to charter school status, states may find themselves paying extra dollars for students who were previously outside the public school system.
- While meeting the basic terms of their contracts, charter schools may teach some things that the public may not want, such as creationism, or fail to teach things that the public expects, such as patriotism.

### *Expansive and Restrictive Legislation*

In some states with relevant statutes, significant time has elapsed without a single charter school having been established, so limited are the incentives for charter schools and so burdensome is the process of becoming one. Other states have enacted less-restrictive legislation which has the effect of encouraging the establishment of charter schools.

The following 12 criteria can be used to determine whether a charter school law is expansive (i.e., facilitates the development of autonomous charter schools) or restrictive (i.e., provides little incentive for charter school development):

- *Number of schools:* States that permit many charter schools encourage more activity than states that permit few.
- *Variety of sponsors:* States that permit multiple sponsors (such as local school boards, state boards, and universities) encourage more activity than those that vest authorizing power in a single entity, particularly if that entity is the local school board.
- *Variety of operators:* States that permit a variety of groups or individuals (such as teachers, parents or other citizens, non-profit organizations, and businesses) to start new charter schools encourage more activity than states that limit eligible operators to particular groups or individuals, such as licensed teachers.
- *Variety of schools:* States that permit existing schools to convert and new schools to start from scratch encourage more activity than those that permit only conversions.
- *Appeals process:* States that allow potential operators to appeal denied charters at the local level to a different authorizing body (e.g., a separate state charter board) encourage more activity than states with no appeals process.

- *Evidence of support:* States that permit charter schools to be formed without demonstration of a specified level of support from teachers, parents, and community members encourage more charter school activity than states that require such demonstrations of support.
- *Blanket waiver from laws and regulations:* States that provide blanket waivers from most or all state and district laws and regulations encourage more activity than states that provide no waivers or require charter schools to negotiate waivers on an issue-by-issue basis with sponsors.
- *Exemption from collective bargaining:* States that give charter schools complete control over personnel decisions (hiring, firing, salary structure, etc.) encourage more activity than states in which charter school teachers remain subject to district collective bargaining agreements.
- *Legal autonomy:* States in which charter schools are legally autonomous entities (e.g., able to sue and be sued, acquire property, etc.) encourage more activity than states in which charter schools remain under district jurisdiction.
- *Funding process:* States in which 100 percent of per pupil funding (based on average state or district per-pupil costs) automatically follows enrolled students to charter schools encourage more activity than states in which the amount of funding must be negotiated with the district and, inevitably, reduced.
- *Financial autonomy:* States that give charter schools control over their own budgets encourage more activity than states that do not.
- *Start-up funds:* States that provide start-up funds to charter schools encourage more activity than states that do not.

### Expansive State Laws

Only one state, Arizona, proves to be expansive in all twelve areas. Arizona permits an unlimited number of charter schools to be established. It lets virtually any individual or organization, public or private, petition to start a charter school. It requires no demonstration of support from public school teachers or parents. Unique among state laws, Arizona's creates a state body—the State Board for Charter Schools—whose sole charge is to examine petitions, approve or deny charters, monitor charter schools, and recommend additional legislation to facilitate the formation of charter schools. The state board of education and local school boards may also sponsor charter schools. An applicant turned down by one body can apply to another.

In Arizona, full funding follows enrolled students to the charter school. For schools sponsored by a district, the amount that follows each student equals the average districtwide per-pupil cost. For schools sponsored by either of the state bodies, the amount equals the average statewide per-pupil cost. In addition, the state allocated \$1,000,000 for start-up funds, though no school may receive more than \$100,000.<sup>33</sup>

Arizona charter schools are legally and financially autonomous and automatically exempt from state laws and regulations, district policies, and collective bargaining agreements. Finally, the law allows existing public or private schools to convert and new schools to form.

Other states with the most expansive charter school legislation include (roughly in order from more to less expansive):

- Michigan
- Massachusetts
- Minnesota
- California
- Colorado

Michigan's law is noteworthy in that it permits four public entities to sponsor charter schools: school districts, intermediate districts, community colleges, and public state universities. This provision has spawned a tremendous amount of activity in the state despite court battles that initially threatened to derail the charter school movement there.

California's law leaves many issues open for negotiation between the charter applicant and the school district (rather than specifying them in advance, as other states do), including just how free the charter school will be from district oversight and local bargaining agreements. According to some observers this open-ended approach can have adverse effects on the chartering process, causing some operators to compromise independence in order to achieve authorization.

Colorado's law is interesting for another reason. Despite clear restrictions in the law (the local school board is the only sponsor, there is no automatic exemption from state laws, and charter schools are not legally autonomous, for example), the state has seen considerable charter school activity. As of September 1995, 24 charter schools had opened.

<sup>33</sup> In some states—California, for example—no start-up capital is provided for charters. This situation has the effect of dampening the number of such schools.

This degree of activity suggests the importance of two criteria. First, anyone in Colorado—parents, nonprofit foundations, community members, businesses, and others—can start a new charter school. This provision makes it possible for different groups and organizations, some of them with unconventional ideas, to petition to start schools.

Second is the appeals process. If a state permits only one entity to sponsor charter schools, and, particularly, if that entity is the local school district (which has little incentive to sponsor schools), charter school activity can be stifled. If, however, potential applicants know that the district's decision may be appealed to another body—in Colorado's case the state board of education—and that that body will provide a fair hearing, applicants may be emboldened to proceed. In fact, several applications in Colorado were initially denied by districts only to be approved after an appeal to the state board. One application, for the Thurgood Marshall Middle School, was twice denied by the Denver school board. However, the Denver board was eventually ordered by the state board and a district judge to sponsor the school.<sup>34</sup>

### Restrictive State Laws

Georgia provides an example of a restrictive charter school law. Georgia is one of only four states (as of a pre-1995 analysis) that allows an unlimited number of charter schools, and one of only four that provides charter schools with some start-up funds (in the form of planning grants). Ironically, however, it took more than a year after Georgia's law was passed in 1993 for a single school to apply for charter status, and another year for a school to be approved. The first three charter schools in Georgia did not begin operating until September 1995.

The main reason for this lack of applications is the structure of the rest of Georgia's law. First, the law allows only existing public schools to become charter schools. In the original version of the law, two-thirds of the teachers and parents in the school were required to approve the charter before the school would convert to charter status. No new schools can be initiated, and no one outside the existing public school system is authorized to start a school.

Second, the state board of education is the sole body that can sponsor a charter school, and it may do so only after the charter has been approved by the school district. Though the state board may hold a hearing to examine charters denied by the district, it is not required to do so.

<sup>34</sup>The state appeals court stayed the judge's order pending the outcome of the district's appeal, so the charter school still has not opened.

Third, schools that do convert are still legally part of the district and subject to some oversight. Fourth, charter school teachers remain employees of the district, not of the individual school. Finally, charter schools do not receive an automatic exemption from state or district laws and regulations. Rather, they must specify in the charter the laws and regulations from which they seek relief.

With so little for Georgia charter schools to gain in terms of flexibility and autonomy, the lack of activity is not surprising. What this suggests is that the number of schools allowed by legislation is often less important in generating activity than the actual chartering process and the incentives for charter schools.

### *Amendments to State Laws*

Charter school legislation in six states has been amended over the years. The amendments often have served to make the original laws more expansive by (a) adding incentives, (b) removing hurdles, or (c) confirming charter school autonomy.

In Minnesota, for example, the original legislation permitted the establishment of only eight charter schools. That "cap" has gradually been raised to its current level of 40 schools. Initially, local school boards could sponsor a maximum of two charter schools each; there was no appeals process; and local boards were the only eligible sponsor. Now, the cap on the number of charter schools a local school board may sponsor has been eliminated; denied charters may be appealed to the state board (which becomes the sponsor if it overturns the denial); and public colleges and universities, as well as local school boards, may sponsor charter schools (though they are limited to a total of three). After the Minnesota Attorney General's office determined that under the original law, charter school teachers were ineligible for the state teacher retirement system, the law was changed to make them eligible. Finally, the law now authorizes charter schools to lease space from for-profit nonsectarian organizations. Originally, they could lease only from nonprofit organizations.

### *Concluding Remarks*

This chapter has provided a brief overview of some of the key issues attendant to establishing a charter school authorizing statute. The information provided was gained from reviewing the experience of those states that have, in various forms, implemented this sort of school reorganization.



MAP is not recommending that Nevada policy makers adopt a charter schools law. Rather, we simply offer this prospect as an additional option to consider in addressing reorganization issues.

Chapter 6, which follows, presents county-by-county profiles and, where appropriate, displays boundary configuration options.



**CHAPTER 6**

**COUNTY-BY-COUNTY ANALYSES AND  
BOUNDARY CONFIGURATION OPTIONS**



## CHAPTER 6

### COUNTY-BY-COUNTY ANALYSES AND BOUNDARY CONFIGURATION OPTIONS

This chapter provides a statistical and text profile of relevant issues impacting on school district boundary configuration decisions for each of Nevada's 17 counties. For some counties, MAP proposes no district boundary changes. In other instances, MAP offers a set of boundary configuration options for the Legislature's consideration.

MAP engaged in a wide variety of activities in order to generate alternative boundary configurations that respond to local concerns. Visits were made to each of the existing 17 school districts, where conversations were held with professional educators and advertised public hearings were conducted. Comments were solicited from a variety of sources (taxpayers' associations, teacher unions, parent organizations, chambers of commerce, state and local government officials, and academic experts) regarding models possibly deserving of assessment. Additionally, MAP has undertaken an extensive survey of the research literature on scale economies and government size. Finally, MAP has relied upon its own past professional experience in instances of school district organization and boundary determination.

The configuration models described in this chapter emerged from multiple conversations and analyses as the most realistic alternatives. That is, they lend themselves to legislative action, seem reasonable, and appear logistically feasible.

This slate of organizational and procedural alternatives results from a winnowing process in which MAP considered and discarded approximately a dozen other boundary reconfiguration models either because they seriously violated one or more of the evaluative criteria described in Chapter 2 (educational effectiveness, racial and ethnic composition, organizational scale, governmental responsiveness and community interests, and financing and facilities) or they were already addressed in the spectrum of models previously analyzed.

For example, MAP considered and discarded the notion of dividing Clark County into two school districts, perhaps separated geographically along the "Strip" of major gaming casinos. The result of such a boundary modification would be two large school districts, each soon to approach 100,000 students. We can find no empirical research to suggest that a district of 100,000 students operates in any significant manner differently from a district of 200,000, which is what Clark County schools will approach by the turn of this century.

Similarly, MAP did not undertake an intense appraisal of an octagonal model for Clark County by which it would be divided into eight small districts. By appraising a Trustee model, separating Clark County into seven districts, and various smaller models (e.g., the Municipal and Secondary school cluster models) we contend that we can test the consequences of a substantial reduction in size without appraising all logical variants.

Before describing each of these alternative models, a reader should understand fully that MAP is *not* recommending that the Nevada Legislature change the existing system or adopt any particular alternative model. Rather, MAP is assessing the apparent comparative advantages and disadvantages of each model.

Counties are presented in alphabetical order.

## CARSON CITY SCHOOL DISTRICT

<u>District Statistical Profile</u>						
County Population <sup>35</sup> (1993)						
	1996	45,530				
	2000	47,730				
School District Enrollment <sup>36</sup> (1995)						
	1996	7,694				
	2000	8,065				
Ethnicity of Students <sup>37</sup> (1994)						
		<u>1994</u>		<u>1983</u>		
	White	82.5%		88.8%		
	Black	0.9%		0.6%		
	Hispanic	11.2%		4.0%		
	Asian/P.I.	2.2%		1.7%		
	American Indian	3.5%		4.9%		
Schools						
	High	1				
	Middle	2				
	Elementary	6				
	Special Education Facilities	2				
Licensed Employees (full time equivalent)				487.1		
Student Achievement <sup>38</sup> (Grade 4 percentile scores) (1996)						
		Reading	Math	Language		
	State Average	51	53	57		
	Carson City	43	40	45		
Student Achievement (Secondary)						
		Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M
	State Average	58	56	21.2	429	484
	Carson City	48	48	21.4	422	468

<sup>35</sup>Nevada Demographer's Office, Bureau of Business and Economic Research, "Nevada Population Estimates (1993) and Forecasts 1994-2000," December 3, 1993.

<sup>36</sup>This is a very rough estimate predicated on assumptions that the portion of the total population being school age will remain constant through the end of the decade and that the Demographer's forecast is accurate. This projects an annual growth of 4 percent, which will yield 12,746 students by 2010. See Carson City School District, "Master Plan Committee Study," June 13, 1995.

<sup>37</sup>Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>38</sup>Smith, David L. "Analysis of Nevada School Accountability System School Year 1993-94," January 1996.

Drop-Out Rate		
State Average		9.6%
Carson City		6.5%
Sources of funding <sup>39</sup> (1995)		
Local		61.5%
State		34.2%
Federal		4.3%
Wealth and debt <sup>40</sup> (1996)		
Assessed Valuation per student		\$95,955
Net Proceeds of mines per student		\$0
Total Outstanding Debt		\$44,095,000
Debt per student		\$5,731
Unused Debt Capacity		\$66,647,219
Tax rates <sup>41</sup> (1996)		
Debt and/or pay-as-you-go	.65	
Combined school taxes	1.40	
Highest rate in county	2.6563	

Carson City is located in a valley at the base of the Sierra, approximately 30 miles south of Reno. County and city are coterminous. The total area is approximately 140 square miles. Government jobs, proximity to recreation at Lake Tahoe and Reno, as well as pleasant outdoor surroundings combine to make Carson City an attractive place to live. The city has experienced annual growth of two to three percent, due primarily to limits on residential construction. The school district has experienced somewhat greater growth at about four percent per year.

Carson City operates nine schools, for approximately 7,700 students, including one high school with an enrollment of about 2100. Most children are bused, but few more than 3.5 miles. Several schools are at or near capacity. The District Master Plan Committee projects an enrollment of 12,746 by 2010 and the need to construct two additional elementary schools, two middle schools and one high school to accommodate the additional students. At the time of the MAP visit, the District was planning to seek voter approval of a series of bond issues totaling about \$80 million. The current tax rate for the support of

<sup>39</sup>Deloitte & Touche LLP, Carson City School District Financial Statements, June 30, 1995.

<sup>40</sup>Thunder, D., Nevada Department of Education, Preliminary report based on district survey, April 16, 96.

<sup>41</sup>Ibid.



schools is about fifth highest in the state; however, overall taxes in the county are among the lowest.<sup>42</sup>

The Carson City student test scores for grades four and eight are among the lowest reported to the State Department of Education in 1993—94. A review of the subsequent year's scores reveals little improvement. A school district should not be judged merely on test scores, and the relative ranking in this case probably is due, in part, to the fact that Carson City reports the scores of a significantly larger percentage of its students; but such scores do seem worthy of further investigation by educators and parents in Carson City.<sup>43</sup>

While there seems to be consensus on the immediate need for a new high school, there does not appear to be agreement on where to locate it. If growth in Carson City continues at the projected modest rate, it may be necessary to operate a new high school below its capacity for a few years, depending on the size and location. However, population growth to the south, in the Jacks Valley/Indian Hills communities of Douglas County, suggests the possibility that a joint venture of the two school districts may meet the short-term needs of both if a high school were located nearer the border.

<sup>42</sup> Ibid.

<sup>43</sup> Comparisons with test scores of other districts should be made with extreme caution. Carson City tends to report scores of a larger portion of their students than other districts. Testing fewer than 95%–98% of all students tends to inflate aggregate scores. Carson City should be commended for “truth in testing,” and portraying a more accurate picture of student performance. Elsewhere MAP recommends that the State establish a minimum portion of the student body that could be tested and specify allowable exemptions.

# Carson City - Schools and Major Highways



## CHURCHILL COUNTY SCHOOL DISTRICT

### District Statistical Profile

#### County Population<sup>44</sup>

1996 21,970

2000 24,727

#### School District Enrollment<sup>45</sup>

1996 4470

2000 5031

#### Ethnicity of Students<sup>46</sup>

	<u>1994</u>	<u>1983</u>
White	80.6%	84.9%
Black	1.5%	1.2%
Hispanic	6.1%	3.5%
Asian/P.I.	4.6%	3.9%
American Indian	7.2%	6.5%

#### Schools

High	1
Middle	1
Elementary	5

Licensed Employees (full-time equivalent) 283.3

#### Student Achievement<sup>47</sup>(Grade 4 percentile scores)

	Reading	Math	Language
State Average	51	53	57
Churchill	56	53	55

<sup>44</sup>Nevada Demographer's Office, Bureau of Business and Economic Research, "Nevada Population Estimates (1993) and Forecasts 1994-2000," December 3, 1993. The medium estimates were used for 1996. The estimate for 2000 was calculated at a 3 percent annual growth rate recommended by the Churchill Planning Commission. See "Churchill County 1990 Master Plan Update #1".

<sup>45</sup>This is a very rough estimate predicated on assumptions that the portion of the total population being school age will remain constant through the end of the decade and that the 3 percent annual growth predicted by the County Planning Commission is approximately accurate.

<sup>46</sup>Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>47</sup>Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.

Student Achievement (Secondary)					
	Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M
State Average	58	56	21.2	429	484
Churchill	69	66	21.7	453	506
Drop-Out Rate					
State Average	9.6%				
Churchill	11.0%				
Sources of funding <sup>48</sup>					
Local	37.1%				
State	55.9%				
Federal	7.0%				
Wealth and debt <sup>49</sup>					
Assessed Valuation per student				\$79,280	
Net Proceeds of mines per student				\$7,796	
Total Outstanding Debt				\$29,435,000	
Debt per student				\$6,585	
Unused Debt Capacity				\$21,722,557	
Tax rates <sup>50</sup>					
Debt and/or pay-as-you-go		.62			
Combined school taxes		1.37			
Highest rate in county		2.9243			

Churchill County covers 3,144,000 acres of high desert, all but 13 percent being public land. Approximately one-third of Churchill County's population resides in Fallon, the county seat and only significant population center. Trade, service, and government account for more than 80 percent of all employment. Growth has been moderate and is predicted to continue at approximately three percent per year through the balance of the century.

The district operates seven schools, all within the city limits of Fallon. Few children live more than twelve miles from the school they attend. Thirty percent of the students are from families whose parents work at Fallon Naval Air Station. Western Nevada Community College also serves the Fallon area.

<sup>48</sup>Kafoury, Armstrong & Co., Churchill County School District financial Report, June 30, 1995.

<sup>49</sup>Thunder, D., Nevada Department of Education, Preliminary report based on district survey, April 16, 96.

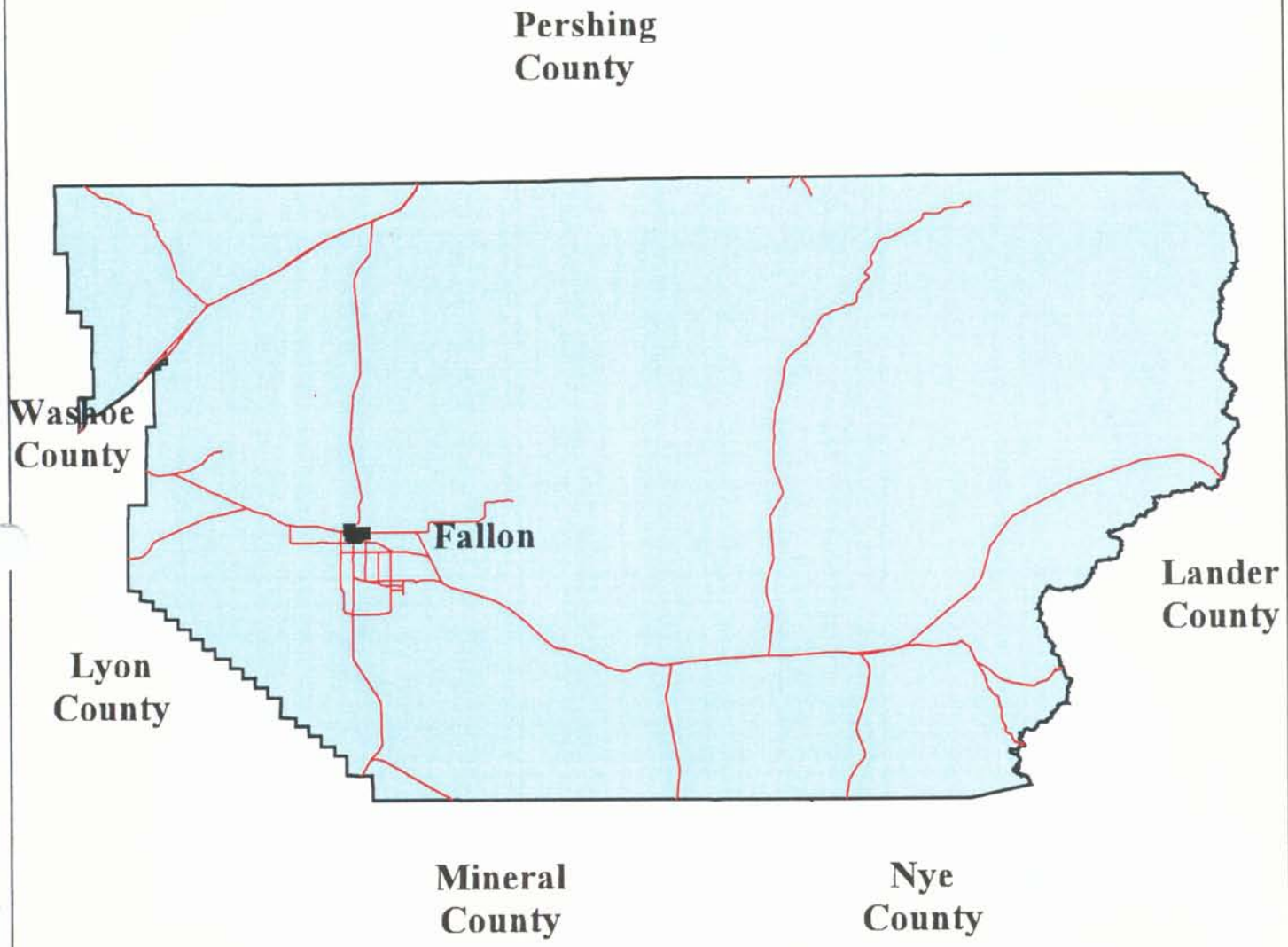
<sup>50</sup>Ibid.

District administrators report little difficulty in passing bond issues in amounts sufficient to build the classrooms necessary to accommodate current modest rates of growth. Test scores tend to be above state and national averages. The elementary schools maintain rather large enrollments, and two are now on year-round schedules, suggesting the need for school construction in the near term. The school tax rate paid in Churchill is about fifth highest in the state, due primarily to the .62 school debt rate. The overall county tax rate is below average, however.<sup>51</sup>

Current Churchill County district organization seems well-suited to the needs and desires of county residents.

<sup>51</sup> Ibid.

# Churchill County - Schools and Major Highways



## CLARK COUNTY SCHOOL DISTRICT

<u>Statistics</u>						
County Population <sup>52</sup>						
	1996 1,013,960					
	2000 1,177,190					
School District Enrollment						
	1996 166,788					
	2000 229,672 <sup>53</sup>					
Ethnicity of Students <sup>54</sup>						
	<u>1994</u>		<u>1983</u>			
White	65.1%		75.5%			
Black	13.8%		15.4%			
Hispanic	15.6%		5.7%			
Asian/P.I.	4.7%		2.9%			
American Indian	0.8%		0.5%			
Schools						
High						24
Middle						27
Elementary						127
Alternative and special education						6
Licensed Employees (full time equivalent)						9,399.1
Student Achievement <sup>55</sup> (Grade 4 percentile scores)						
	Reading	Math	Language			
State Average	51	53	57			
Clark	53	54	58			
Student Achievement(Secondary)						
	Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M	
State Average	58	56	21.2	429	484	
Clark	55	61	21.0	432	494	
Drop Out Rate						
State Average	9.6%					
Clark	10.8%					

<sup>52</sup> Nevada State Demographer, Nevada Population Information, June 1994: Medium estimates

<sup>53</sup> Clark County School District, Enrollment and Projection Data, December 18, 1995. Represents district's estimate of most likely enrollment. The district's low estimate was 220,763 and high was 238,861.

<sup>54</sup> Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>55</sup> Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.

<b>Sources of funding<sup>56</sup></b>	
Local	69.5%
State	30.1%
Federal/other	0.3%
<b>Wealth and debt<sup>57</sup></b>	
Assessed Valuation per student	\$113,367
Net Proceeds of mines per student	\$41
Total Outstanding Debt	\$827,140,900
Debt per student	\$4,959
Unused Debt Capacity	\$1,674,333,714
<b>Tax rates<sup>58</sup></b>	
Debt and/or pay-as-you-go	0.4435
Combined school taxes	1.1935
Highest rate in county	3.2329

Fueled by gaming and entertainment, Clark County is by far the largest and, in absolute numbers, the fastest-growing county in Nevada. While the general perception of many outsiders may be that Las Vegas is all of Clark County, there are, in reality, medium-sized cities such as Henderson (95,000), and North Las Vegas (61,000), smaller cities such as Boulder City (13,500) and Laughlin (7,500), and rural areas such as Moapa, Searchlight, and Goodsprings. Still with a population of approximately 700,000 and the majority of the casinos and hotels, Las Vegas sets the agenda for Clark County. Approximately 57 percent of the county population resides in the cities of Las Vegas, North Las Vegas, Henderson, Boulder City, and Mesquite. The remaining 43 percent live in the unincorporated County.

In the 1980's, 35,000 hotel rooms were constructed in Clark County and as many as 40,000 more may open during the remainder of the 1990s. Mirage Resorts, Inc. and MGM Grand, Inc. are scheduled to open 3000 room and 2119 room hotel/casinos this year. Bally Grand, Inc.'s Paris Casino Resort is scheduled to open in 1997. Tourists keep coming; in 1994 more than 28,200,000 people visited Clark County.<sup>59</sup> With the added hotel rooms needed to accommodate these visitors come jobs, and with jobs come children to be educated.

<sup>56</sup> Deloitte & Touche LLP, Clark County School District Financial Report, June 30, 1995

<sup>56</sup> Thunder, D., Clark County School District Financial Report, June 30, 1995

<sup>57</sup> Thunder, D., Nevada Department of Education, Preliminary report based on district survey, April 16, 1996.

<sup>58</sup> Ibid.

<sup>59</sup> Clark County School District, Comprehensive Annual Financial Report, June 30, 1995.



Notwithstanding any dramatic changes in the County economy, Clark's population will grow another 100,000 to 150,000 or more in the next four years. Addressing this unprecedented growth seems to dominate the attention of educators, parents, and other citizens concerned about the public schools. In 1992, 136,188 students attended school in Clark County. Only three years later, that number had swelled to 166,788. Continued growth is projected well into the next decade.

Finding ways to house and teach 10,000 additional children each year presents a formidable challenge. In an effort to cope with the rapid growth in enrollment, many of the District's schools are on year-round schedules. Since 1986—87 the District has built and opened 66 new schools. Staffing District classrooms, and hiring approximately 1,000 new teachers each year, requires an extensive national recruiting effort. Facilities are an issue as well. Based on a somewhat limited tour of Clark County schools, MAP observed significant disparity between the quality of facilities in many of the older areas and the schools being built in the newer communities.

The genesis of this study and the central question which frames MAP's analysis is whether the current configuration of the Clark County School District is the most effective to address the twin challenges of growth and size and still provide a high-quality education for all of its students. Would some number of smaller districts be better able to adapt and accommodate growth? Are there economic, equity, or pedagogical advantages of a large district that outweigh any real or perceived increases in responsiveness or representation attributable to smaller districts? Will the balance tip in another direction if Clark County School District grows, as projected, to 320,000 students in 2005<sup>60</sup>? Are there ways to construct new district boundaries that will not isolate or otherwise disadvantage one or more groups of students or taxpayers? Are there alternatives to changing district boundaries that address the concerns of critics of the current organization?

MAP encountered several individuals and groups who passionately argued for dividing the school district into some number of smaller units. They voiced concern about a central office bureaucracy preoccupied with standardization and control. Many complained about overcrowded schools, ever-changing bus schedules, and inadequate attention to academic excellence. Copious examples of each were presented. But underlying almost every complaint was a concern that ordinary parents, concerned primarily about their own children, do not count for much; that their voices just are not heard. Anecdotes frequently referred to "one size that does not fit all" and not-always-flattering comparisons of the school district to the Postal Service. For these citizens, too many decisions affecting them and their

<sup>60</sup> Clark County School District, Enrollment and Projected Data, Op Cit.

children are made distantly, in a manner difficult for them to fathom. The issue for this segment of the population boils down to self-determination—the ability locally to influence educational programs and policies.

Equally fervent were those who oppose changing the current school district organization. They argue that only a district of substantial size can accommodate the incredible growth and diversity of Las Vegas in a way that provides equity among the many disparate citizens. Serious reservations were expressed about creating a number of smaller districts which would further isolate particular groups, exacerbate existing inequalities in school facilities and instructional resources, and lead to severe inequities in fiscal resources, especially in generating capital outlay funds necessary to accommodate growth. Employees expressed grave concern about the effect of their rights on dividing the District. Advocates for special education programs expressed alarm that their programs, which draw upon a large cross-section of the County, would be placed in jeopardy. Finally, opponents of change asserted that breaking into a large number of smaller units inevitably would increase the cost of doing business by duplicating existing administrative functions, thus siphoning money away from the instructional program.

To be sure, proponents and opponents of District breakup argue both from philosophical and self-interested perspectives. Proponents of District division hold to the view that small is better—more accessible, responsive, and efficient—and, within reason, they are willing to pay for what they perceive to be the advantage. Their interest is in securing for their children a more tailor-made education.

Opponents of District-division argue from the vantage point of historical struggles to achieve a kind of broad-based educational equity. Additionally, for a significant segment of opponents, self-interest in preserving a larger base from which to yield influence is key.

As the Legislature grapples with these competing points of view, it is important to underscore that the Legislature (and the Governor) are uniquely empowered to tailor a response. Many of the important issues which have been raised can be resolved by the manner in which change, including reorganization, takes place. Parental concerns about enhancing involvement in school site decision-making can be addressed by a wide variety of options, which we discuss in subsequent sections. Employees' concerns about their status can be resolved statutorily. Special education programs can continue to operate on a county wide basis through interdistrict attendance agreements, even if the existing district is split into multiple subparts. School operating revenues can be equalized throughout a county to ensure that wealth-based inequities do not creep back into the system. The state can assist in equalizing districts' abilities to raise capital outlay funds, a suggestion MAP pursues

elsewhere. In sum, there are many techniques available to the Legislature to fairly implement whichever policy priorities gain precedence.

In the section that follows and elsewhere, MAP describes a number of options that Nevada policy-makers could consider to address many of the concerns raised about the Clark County School District. These include more empowerment of local communities through greater representation on the governing board, establishing charter schools, encouraging school-based management, or creating some number of new school districts from the existing single district. We invite the Legislature to mix and match these policy tools to create the combination of laws and regulations that are most consistent with the unique culture and environment of Nevada and, more specifically, Clark County.

Assuming that the Legislature decides to change from the status quo, its next major decision should regard the relative balance of state and local control over the various procedures and policies they choose to employ. For example, at one extreme it could mandate school site management, the timetable for implementing it and the amount and nature of assistance to be provided local schools as they assumed more autonomy. Alternatively, it could authorize creation of the policies and procedures described below, and then provide incentives for the central office to devolve currently centralized authority to individual schools. Similarly, the Legislature could exercise its constitutional authority to create smaller school districts along lines that it chooses, or it could adopt laws that specify the conditions under which local communities could initiate boundary changes. The latter approach would afford communities which would rather not remain part of the larger district an opportunity to create their own school district, if they met certain conditions specified in law. Those that are not dissatisfied could endorse the status quo and remain in the larger district.

Finally, it is essential to keep in mind that none of these options operates in a vacuum. Most of them require supportive or enabling legislation if they are to become viable. School-based management is unlikely to become a reality without the enhanced assessment, reporting, accounting and other changes described below. The promise of charter schools is unlikely to be realized if they face unreasonable barriers to formation and excessive bureaucratic constraints on operation. The prospects for forming smaller districts in Clark County are almost nil without some manner of county-wide equalization of operating revenues and state wide equalization of funding for capital outlay.

### Options

The advantages and disadvantages of the current school district are well known and opinions well formed. Change is fraught with uncertainty and

significant change will exact a financial and psychological toll. For some the status quo is so intolerable or the potential improvement so great that, change is worth the risk and cost. Whether to change is a political decision. The discussion that follows will provide some insight into the implications of various alternatives to the status quo. The options are organized into two categories. Options that do not involve any alteration to district boundaries are followed by analyses of possible boundary reconfigurations.

One strategy that early reports from other states indicate offers significant promise is charter schools. These are discussed elsewhere in this report (see Chapter 5) and could be employed in conjunction with any of the options, including being a variant of the status quo. The two remaining options for consideration are changing the way in which the District is managed and increasing the number of trustees.

### **Management System Alterations**

Critics of the existing Clark County school district performance sometimes attribute to boundary circumstances operating weaknesses that might more probably flow from management matters, or at least which quite possibly could be addressed effectively with management changes rather than boundary changes.

For example, Clark County currently depends heavily on a central office "command and control" model. Budgeting, personnel, recruitment, utility and maintenance matters, substitute teachers, supply and equipment purchasing and distribution, transportation, and school facility planning are among the functions planned and controlled from the District's central office. Principals and teachers have little knowledge of, and less discretion over, the overwhelming proportion of resources spent to operate their schools.

This highly centralized management approach flies in the face of progressive private sector management techniques and is even at odds with what are conventionally regarded as centralized agencies such as the U.S. military.

However, before becoming too critical of this existing operating model, one must take results into account. Clark County is the nation's tenth-largest school district. If one had to select randomly among attending any one of Clark County's public schools or a modal school in New York City, Chicago, Miami, Buffalo, and so on for a large number of the other heavily urban districts in the nation, one might well select Clark County. Whereas dropout rates are high and student achievement has too many valleys and too few peaks, the District has nevertheless managed, in the face of virtually unparalleled growth, to recruit an able teacher work force, select a large number of dynamic principals, and maintain a tone of civility and orderliness which should not be underrated.

In effect, the existing management model has enabled Clark County to cope with substantial change and has maintained certain standards in the process. The difficulty, claim critics, is that however good the District has been, it is no longer good enough. The 21st century will call for higher levels of learning for many students, and Clark County schools will need to overcome a culture of complacency and mount a major effort for excellence. If that is to be done, then an alternative management model may be necessary.

### *What is the Problem?*

A "command and control" management model can sustain the status quo. However, it is severely challenged to achieve excellence because of a crucial disjuncture in authority and accountability that it imposes. Currently in Clark County, accountability for performance is concentrated in the school board and Superintendent. If there is dissatisfaction with the District, if performance is low or if malfeasance is seen to be high, these eight individuals can be replaced with relative ease. The Superintendent can be fired or his contract bought out, and school board members can be opposed at the polls and unelected. In this sense these individuals are all accountable to the general public.

However, these accountable individuals are the furthest removed from the day-to-day operation of schools. Whereas the school board and superintendent are empowered, they are not positioned. Those who are appropriately positioned, principals and teachers, are seldom empowered. They are placed in the awkward position of operating schools and classrooms with only minimal formal authority. To hold them accountable for results under these arrangements would not be fair.

Thus, what is needed is a realignment of authority and accountability. The operating integrity of schools can be restored only by shifting authority to schools, holding them responsible for performance standards, and utilizing a central office to provide assistance, not to issue orders.

Such a site-based system would budget around schools, would keep its accounts school-by-school, would empower principals and teachers, and possibly parents, to make decisions regarding budget and resource allocation matters such as use of substitute teachers, textbook selection, utility use, staff development, and tradeoffs regarding class size and special program provisions.

These school-based management arrangements would need to occur within a context of state, or county, performance appraisal. Each individual school would have to be held accountable by, among other measures, the student performance standards agreed to by the district and the state. If an individual

school, in some sustained manner, failed to meet threshold performance expectations, then the district would be expected to initiate remedial action of an appropriate nature.

Such a site-based system might still need to engage in district-wide activities for functions such as facility planning and providing special education services. However, activities such as maintenance and repair, custodial services, food service, and possibly even transportation could be purchased from the central office by schools, if they chose to. Or, they might be given an option to purchase such service from providers other than the central office. In effect, such a model renders much of the central office a service agency whose offerings are available to schools to purchase, if they deem them valuable. Under such a site-based system, schools are empowered as customers for central office services.

Alterations such as the above described would require little or no approval from the state and would not necessarily require that school district boundaries be altered. In fact, if Clark County were divided into multiple smaller districts, deconsolidated into, for example, four or eight districts, each of the resulting organizations would almost assuredly need management changes of the kind described above, even if they were smaller than what now exists.

### *Possible State-Level Enabling Actions*

If the state in its wisdom chooses consciously to alter the Clark County management strategy, or the management strategy for any other Nevada county, there are several policy levers that can be pulled from the state level. These levers would by no means guarantee the success of a school-based management approach. However, they would take large strides toward ensuring that the district actually attempted the new strategy. State action to induce school based management should be constructed around three principal activities or conditions: (1) Autonomy, (2) Accountability, and (3) Assistance.

- *Revenue Pass Through Provisions*

The state could mandate that the Clark County School District, or all school districts, for that matter, pass some minimum threshold (e.g., 90 percent) of all school district revenues to individual school sites based upon a formula basis. The formula would ensure that each similarly situated student be treated equally regarding financing, much as is done for school districts under the current Nevada Plan.

- *School-By-School Accounting Provision*

The state could mandate that school districts keep records of spending school-by-individual-school. It is essential that these records be maintained and reported consistent with uniform format and procedures.

- *Annual School-by-School Performance Reports*

The state could mandate publication annually of performance reports in which each school described, in language understandable to lay persons, its individual performance on dimensions such as statewide student achievement tests, drop-out rates, levels of parent satisfaction, teacher qualifications and grievance levels, and, where appropriate, numbers of households choosing to apply for admission to the school. The major differences between the kinds of reports which commonly exist and these is that the school would report its performance relative to specific standards and would be held accountable for producing specified outcomes.

Precision and reliability of these reports could be enhanced if each student were uniquely identified (e.g., social security number) regardless of school or school district of attendance. This would allow much more accurate measurement of achievement over time, drop-out rates and similar measures of school performance.

- *Site Accountability in the Context of State Testing*

Clark County, or other school districts implementing school-based management, would be expected to adhere scrupulously to any Nevada statewide testing program. Even without moves toward more decentralization, schools should be required to test some minimum portion (e.g., 95%) of the eligible student population. Exceptions for language proficiency or some special education students should be minimal and should be clearly delineated for all schools statewide. Otherwise, aggregated scores tend to be inflated and valid comparisons among schools (or school districts) are difficult to make.

Assessment experts refer to the acronym WYTIWYG, which stands for "What You Test Is What You Get." By this they mean that high stakes testing tends to shape the curriculum. Narrowly constructed assessments tend to narrow the focus of instruction. Test only reading and writing and in many schools mathematics, science, history and art will get short shrift. All things being equal, one would want to test the complete breadth and depth of a high quality curriculum. This would provide an incentive for schools to offer a full and rich instructional program for all students. Of

course not all things are equal, and in the real world there are cost-quality trade-offs. In the extreme, such assessments would be prohibitively costly to develop and administer and could take too much time from instruction. At the other extreme, inexpensive tests may have a deleterious effect on instruction. Unfortunately, this tension is rarely fully resolved. However, if schools are to be held more accountable for student achievement, it is essential that the Legislature make conscious choices between these trade-offs and pitch their expectations accordingly.

- *Value-Added Testing*

In time, where possible, such performance measurement should be "value added." It should endeavor to discern what a student knew at the beginning of an assessment period and what a particular grade or school added by way of learning value. On its face, this is a straightforward and appealing concept. One would test a student at the beginning of the term and again at the end. The differences between the scores would represent the "value added." In practice, it is quite complex to isolate how much the school influenced the change in score and how much of it was caused by other factors over which the school has little control. How much was a student's score influenced by parental tutoring, or other family resources, or family problems, or a chronic illness? These problems become particularly acute when schools or teachers are being evaluated or compared on the basis of the value they add. Some states are piloting value added assessment; but it is likely that it will be some time before procedures that are fully accepted by professional psychometricians are developed.

- *Public School Parent Choice Provision*

The Legislature could authorize households to select among public schools, regardless of residence. The State should institute safeguards to prohibit racial segregation or discrimination against special education students. It could also consider provisions to minimize or avoid "skimming" the best athletes or scholars. These provisions should be as minimal as feasible in order to preserve the benefits of choice and competition. Over specification of such rules would tend to obviate the advantages of choice.

- *School-Based Purchasing Power*

The Legislature could authorize individual public schools to purchase supplies and services from competitive vendors. This would change the relationship between the school and the central administration and



provide incentives for the central administration to be more cost effective and service-oriented.

- *Provisions to ensure Parent Access to information*

Parents often have a substantial interest in their child's well being. However, this does not always translate into knowledge about the most efficacious means for achieving desired educational ends. In a nutshell, not all households are well informed and equally prepared to take advantage of the opportunity of choosing a school for their child. Hence, legislation intended to further household choice of public schooling, and render school-based management more successful, must contemplate a mechanism for ensuring that parents have adequate and equal access to information.

- *Parent and Community Participation*

Provisions should be made to ensure that parents and other community members are afforded an opportunity to participate in important decisions at the school. The perspectives of these groups are essential to making decisions that result in educational programs that are most responsive to the needs and aspirations of the students served by the school and their parents. They are important sources of advice and feedback on past or proposed actions. Such participation is essential to making sound decisions and maintaining good community relations, and it is hard to imagine a principal succeeding for long without regularly consulting these groups. However, parents and community representatives are not held accountable for results; the principal and other educators at the school are. Therefore, the role of parents and community groups in school-based decision-making is appropriately advisory.

While many successful principals will find *ad hoc* mechanisms for obtaining advice, more formal arrangements, with clearly delineated roles, may be more effective and may avoid the conflict that inevitably accompanies ill defined decision making relationships. There are numerous models for the composition and methods of selecting membership. The advisory body could be comprised solely of parents, or it could be comprised of some mix of parents, community representatives, and educators. Members could be appointed by the governing board, principal, teachers' union, some other entity, or members could be appointed by the groups they represent. They could be elected by parents, faculty, or community at large.

More important than the particular model chosen is the specificity of the range and limits of issues on which this entity is expected to provide advice and the forum in which it is provided. Do they advise on the

annual budget, staffing decisions, curriculum, class schedules, test book selection, discipline standards, grading policies? Or are there some decisions about which they will not be consulted? Is consultation only informal meetings with the principal? Or is it a more formal, more public process with "hearings" and formal reports? Or is it some combination?

One model could be prescribed for the state or the district, or the Legislature could provide a limited menu from which schools could choose. The range of choices is quite large and no single model stands out as being without problems. Ultimately, the choices narrow to those that are most comfortable to the citizens of Nevada; but advance, careful specification of roles, procedures, and expectations will help minimize acrimonious disputes when local educators initiate the process.

- *Assistance to Schools*

Principals and teachers are sometimes anxious regarding school-based management because of a long history of dependence upon a central office for decision-making. New-found school-level empowerment may itself be frustrating in the absence of assistance in learning to manage a school. Hence, legislation intended to further school-based management should anticipate a mechanism, perhaps centrally provided, by which principals, teachers, and parents can gain assistance in making such a transition.

- *Sanctions*

More autonomy will not guarantee that all schools will improve. Indeed poor decisions are no less likely locally than centrally; although the impact tends to be more contained and the corrections more dictated by local context. Implicit in the structure outlined above is that schools are accountable for results and that there are consequences if they cannot or will not deliver those results.

One approach to consider could be based a series of steps of progressively more aggressive interventions. The first step could occur if the school failed to meet certain standards within some specified period, say two years. At that time, the district would offer various forms of assistance appropriate to the context. If the school demonstrated no improvement the next year, the district could mandate indicated corrective action. If this did not produce satisfactory results, the district could take more extreme measures, such as replacing some or all personnel. If the district were unable or unwilling to change the performance of a persistently failing school, the State could, as a last resort, declare the school (or the entire district) "educationally bankrupt" and appoint a trustee or take some similar action until the program began to meet the state-established

standards. Specification of the exact nature of these provisions are beyond the scope of this study, but several states have adopted similar laws and could serve as models for Nevada to consider.

The purpose of these illustrative statutory changes is to alter the locus of school decision making and render it far more responsive to client preferences. However, the illustrative actions attempt to achieve such purposes in a manner which preserves economies of operational scale and protects the broader interests of the state. Such powerful alterations are unlikely to succeed solely via state legislative fiat. The transformation is most likely to succeed if incentives orient a school system toward gaining and sustaining client satisfaction. Those who are best informed and most likely to have the clients' interests at heart should have control of the resources. While this is true, one continues to need a measure of state and district participation and oversight in order to protect the interests of the larger public.

While this discussion of school-based management is offered in the context of concerns about Clark County, the basic premise would be valid in any district in which there is considerable organizational or even geographic distance between the central office and parents and students, the schools' clients.

### **Expanding the Number of School Board Members**

A second option that does not contemplate boundary changes and that may address the feeling of alienation expressed by some residents of Clark County School District is increasing the size of the governing board. Those who are critical of the governmental responsiveness of Clark County contend that there are two related problems. First, there is a shortfall of representativeness. Clark County's populace has far greater access to state government, and state-elected officials, than it does to school officials. Critics point to the fact that there are 13 state Senators and 26 members of the Assembly representing Clark County. This is a total of 39 elected positions for a million constituents. By contrast, there are only seven Clark County school board members, each one of whom by the same arithmetic must represent almost 150,000 citizens.

A second critical contention is that the current system of election by ward or district may facilitate added representation from historically underrepresented minority groups. However, they assert, there is a "cost." District elections encourage a kind of parochialism by which each school board member may be encouraged to speak for his or her immediate constituents first and the welfare of the entire school district second. Such a political dynamic, arguably, fuels a brokering, rather than an administrative, role for the Superintendent and contributes to a "Christmas tree" mentality

by which the board builds a voting majority by accreting something favorable to each ward.

Numeric parity with state elected officials seems unreasonable in the instance of school board members, who, after all, meet throughout the year every year and who, presumably, represent students and their parents somewhat more than citizens in general. Nevertheless, a case for a larger school board can be made. For example, expanding the board to a total of 11 or 13 positions, all additional positions of which were elected at-large, might both expand responsiveness and overcome the criticism of parochialism.

### Analytic Methods

When considering the analyses that follow, it is important for the reader to keep in mind certain limitations on the data used. The analyses were conducted using data from three sources—school district student data files, census data files and Clark County Assessor property files. The school district data and assessor data are current. The census data are from the 1990 census. Subsequent to the previous report, school trustee area boundaries were provided and the MAP consultant intersected these with the census block group polygons. This new set of polygons allowed a more precise definition of both the Trustee Area Model and the Metropolitan based plans. The MAP consultant, with the cooperation and assistance of the School District, was able to reconstruct the student database to account for virtually all students. Current Assessor parcel data and the reconstructed student data were intersected with the new polygon base.

The maps used in the analyses were constructed by merging the three data bases into a single database organized by census block groups within trustee area boundaries. Census block groups are clusters of blocks, within the same census tract, having the same first digit of their three digit block number. While this convention was necessary and useful for some analyses, it does introduce a level of imprecision. Census block groups vary in geographic size, more or less by the amount of population they contain. Typically, a census block group in an urban area with dense population will cover a much smaller geographic area than will a census tract in a more sparsely populated rural area. In fact, the vast majority of census block groups in Clark County are located in or nearby Las Vegas and cover only a few city blocks each. Census block groups in the sparsely populated areas often cover many square miles.

Unfortunately, other governmental and operational jurisdictions often do not coincide with census tracts. For example, there may be more than one

voter precinct in a census block groups or more than one census block group in a voter precinct. This is particularly problematic in the regions outside of the Las Vegas Metropolitan area where very large census block groups are intersected by two or more trustee area boundaries. Since there is little population and relatively little assessed value in these outlying areas, this loss of precision should not materially affect conclusions drawn from the analysis.

It is important for the reader to understand how various analytic and illustrative scenarios were constructed. Even though very powerful, state-of-the-art computer software and hardware were employed in these analysis, it was not possible to automatically draw alternative districts that balance on any of the important variables such as assessed value or racial balance. Each plan was constructed by a trial-and-error process of combining census block groups, block group by block group, to form alternative districts and then analyzing the impact of each move on each of the important variables. There are several hundred census block groups in Clark County. It should be apparent that the potential number of combinations is huge.

### **Alternative Boundary Reconfigurations**

The size, diversity, and complexity of Clark County imply that the number and shape of possible school districts is large. In earlier progress reports, MAP discussed the process of narrowing the analysis to a manageable number and the reasons for rejecting some options. For example, splitting the existing school district into two, three or even four seemed to hold little promise of offering sufficient improvement on any of the evaluative criteria to warrant the associated effort. At its April 1996 meeting, the Subcommittee agreed that the three following models for changing district boundaries be analyzed. These are: 1) configuring school district boundaries to be more congruent with municipal boundaries; 2) dividing the district among trustee areas; and 3) creating school districts from high schools and their feeder schools. These options do not represent the universe of possible changes, but are illustrative of possible approaches. It is important for the reader to keep in mind that the specifics of enrollment, relative wealth, and even the demographic characteristics of various populations can shift rather quickly and would need to be reconsidered by the time any change could be initiated.

In our June 11, 1996 report to the Legislature, MAP examined each of the three boundary-change models. All were found wanting on one or more evaluative dimension; however, Plan B, a variant of the Trustee Area Model, appeared to offer the most promise. This model was an attempt to create some number of districts which, to the extent possible, would be racially balanced, and none of which would have a population of students that were more than half minority. That is to say, there would be no districts where minority students would form a majority of the student population. Because

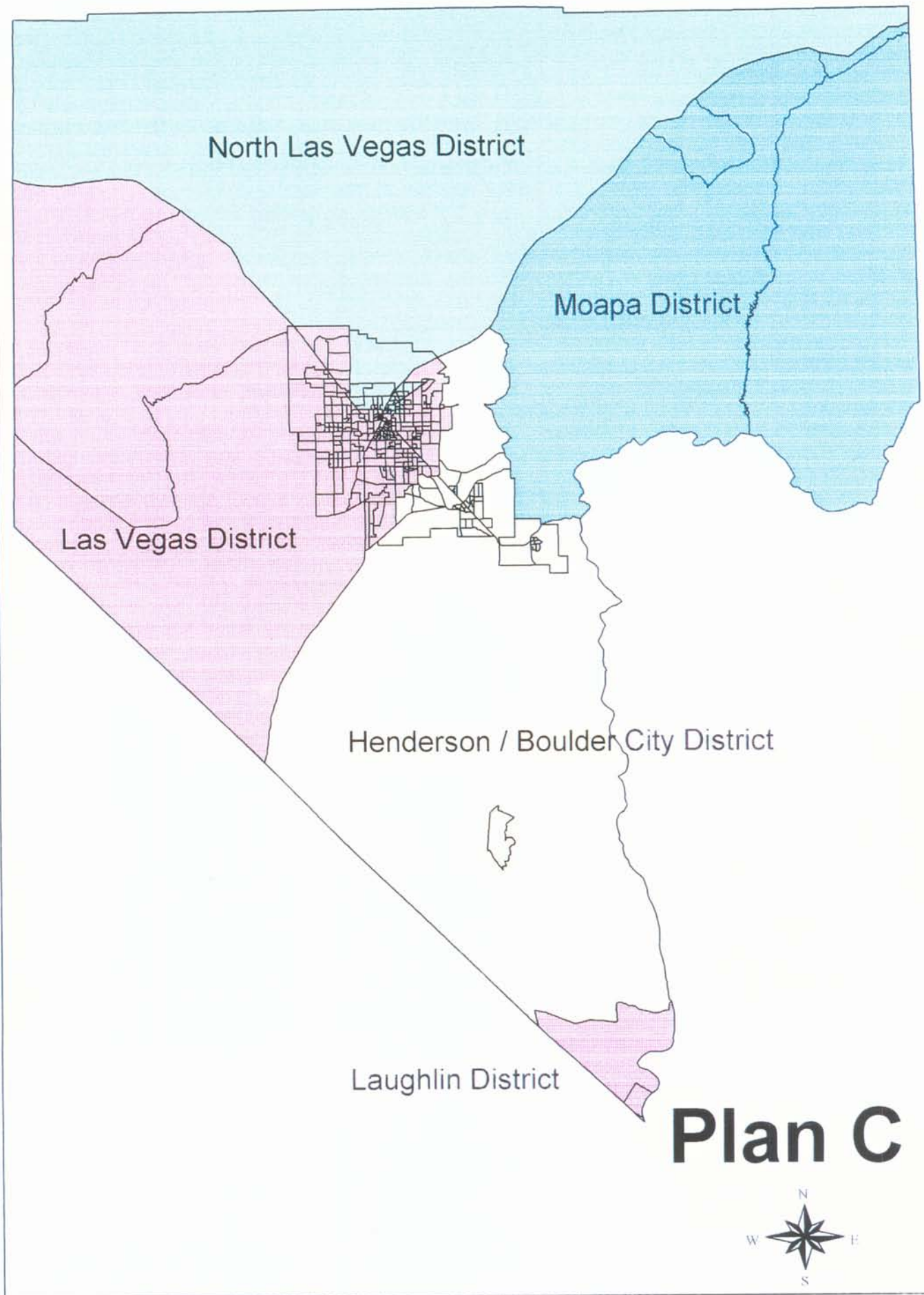
of the uneven distribution of assessed value and sources of sales tax revenue, this model would be viable only if these taxes continue to be collected county wide and allocated to the newly formed districts on a pro-rata basis.

In the process of creating and analyzing the Plan B districts, MAP reconstructed the databases to allow a more fine grained analysis. The Municipal Boundary Model and the Trustee Area Model were analyzed using these improved data. They are described below. The revised data did not change the conclusions reached previously. The Secondary School model showed little promise and will be only briefly described in this report.

### *Municipal Boundary Model for Clark County*

Under this alternative boundary scenario, each municipality within Clark County with more than 10,000 residents would have an option of becoming a separate, fully autonomous school district. Cities such as Las Vegas and North Las Vegas, and combinations of cities such as Henderson and Boulder City, would be the communities currently meeting such a criterion. Because it is so remote from the next city of comparable size, Laughlin was established as a separate school district. Unincorporated areas were consolidated with adjacent municipal districts. This does create some districts that encompass very large geographic areas; but, for the most part, the large land mass is sparsely populated. In some other cases, unincorporated areas are land locked by incorporated cities. In all cases it seemed more reasonable to form the districts as we have than to create some sort of county-wide intermediate agency for the unincorporated areas. Either choice would have little effect on conclusions drawn from the analysis.

This model tends to score highly on the community-cohesiveness dimension; but suffers from grossly unequal assessed value per pupil, creates a heavily minority district, and leaves Las Vegas with over 100,000 students. As a stand-alone option, it seems to fail to adequately address the concerns raised about the current district configuration. See map displaying Plan C.



# Plan C



### *Trustee Area Boundary Model for Clark County*

Clark County currently has seven school board trustee districts. The boundaries of these districts are adjusted periodically to comply with criteria regarding student enrollment and overall population characteristics. Thus, MAP undertook a simulation of the consequences of dividing Clark County into seven districts, along existing Trustee Area lines.

The principal purpose of this analysis was to attempt to construct seven viable school districts, rather than to preserve trustee boundaries, per se. Existing trustee boundaries proved to be significantly unequal in assessed value per pupil, very different in terms of racial and ethnic population, and uneven in total student population. This analysis led MAP to conclude that population patterns and location of property-wealth make it extremely difficult, if not impossible, to balance simultaneously assessed value and demographics in any reasonable number of smaller districts.

This model, without modifications, features serious impediments similar to the Municipality Model. Assessed value is unequally distributed among the areas, they are not racially balanced, and, for the most part, the trustee boundaries do not seem to correspond to identifiable communities of interest. See map displaying Plan D.

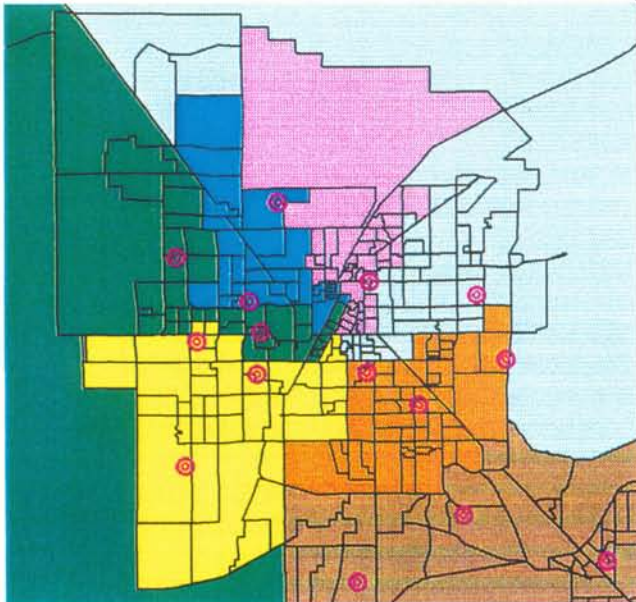
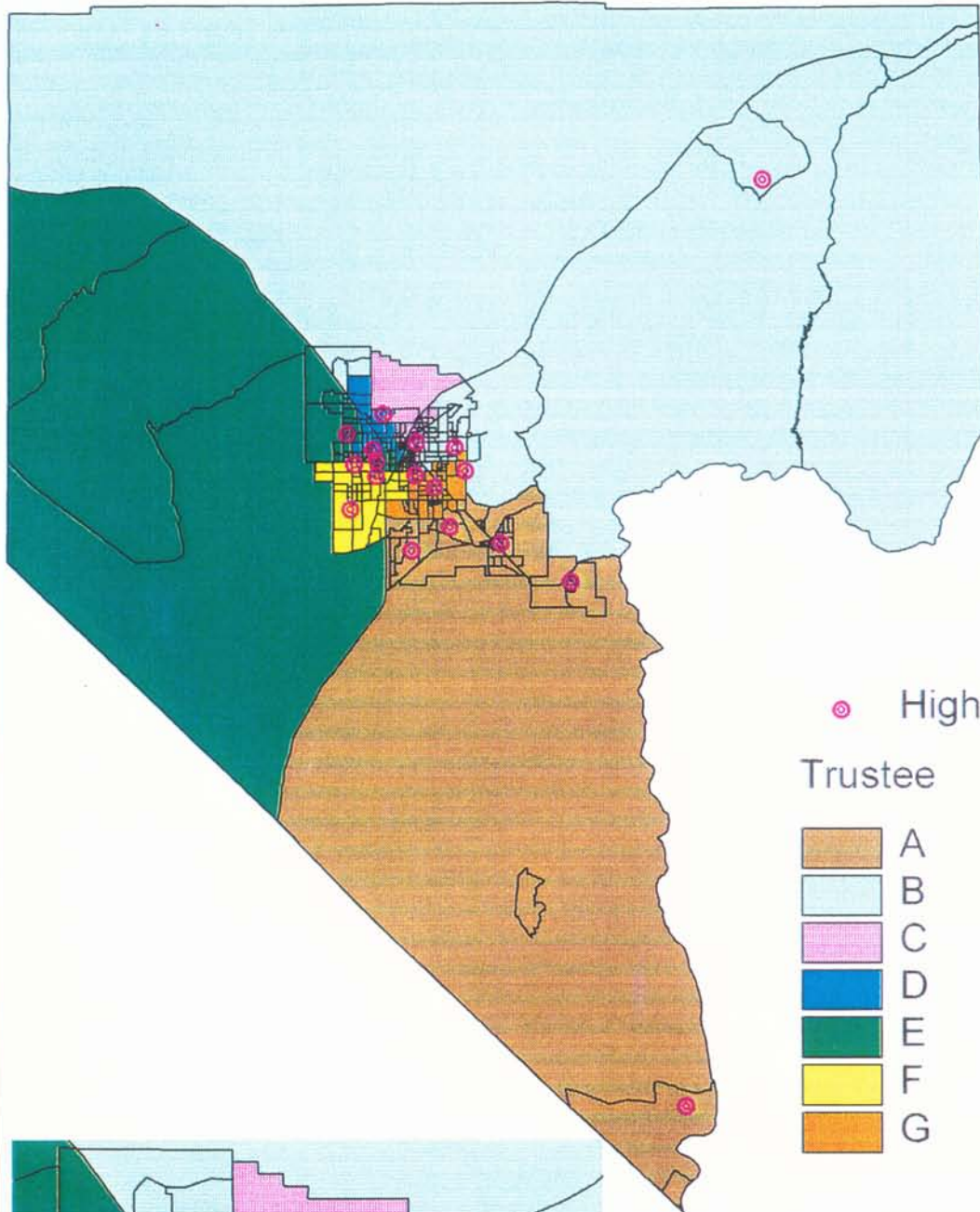
Plan D Modified Trustee Areas

District	Pupils	Assessed Valuation	AV/Pupil
A	30,058	\$3,503,070,794	\$116,544
B	29,737	\$1,605,092,724	\$53,976
C	23,918	\$1,893,846,540	\$79,181
D	14,431	\$3,836,931,286	\$265,881
E	29,295	\$3,665,877,275	\$125,137
F	21,175	\$3,074,459,059	\$145,193
G	18,195	\$1,860,771,715	\$102,268

Plan D Modified Trustee Areas

District	Pupils	% Min	White	Black	Hispanic	Asian	Am. Ind.
A	30,058	19%	81%	4%	10%	4%	1%
B	29,737	43%	57%	17%	19%	5%	1%
C	23,918	76%	24%	36%	36%	3%	1%
D	14,431	61%	39%	14%	39%	7%	1%
E	29,295	25%	75%	9%	11%	5%	1%
F	21,175	27%	73%	7%	12%	7%	1%
G	18,195	34%	66%	10%	17%	7%	1%





# Plan D

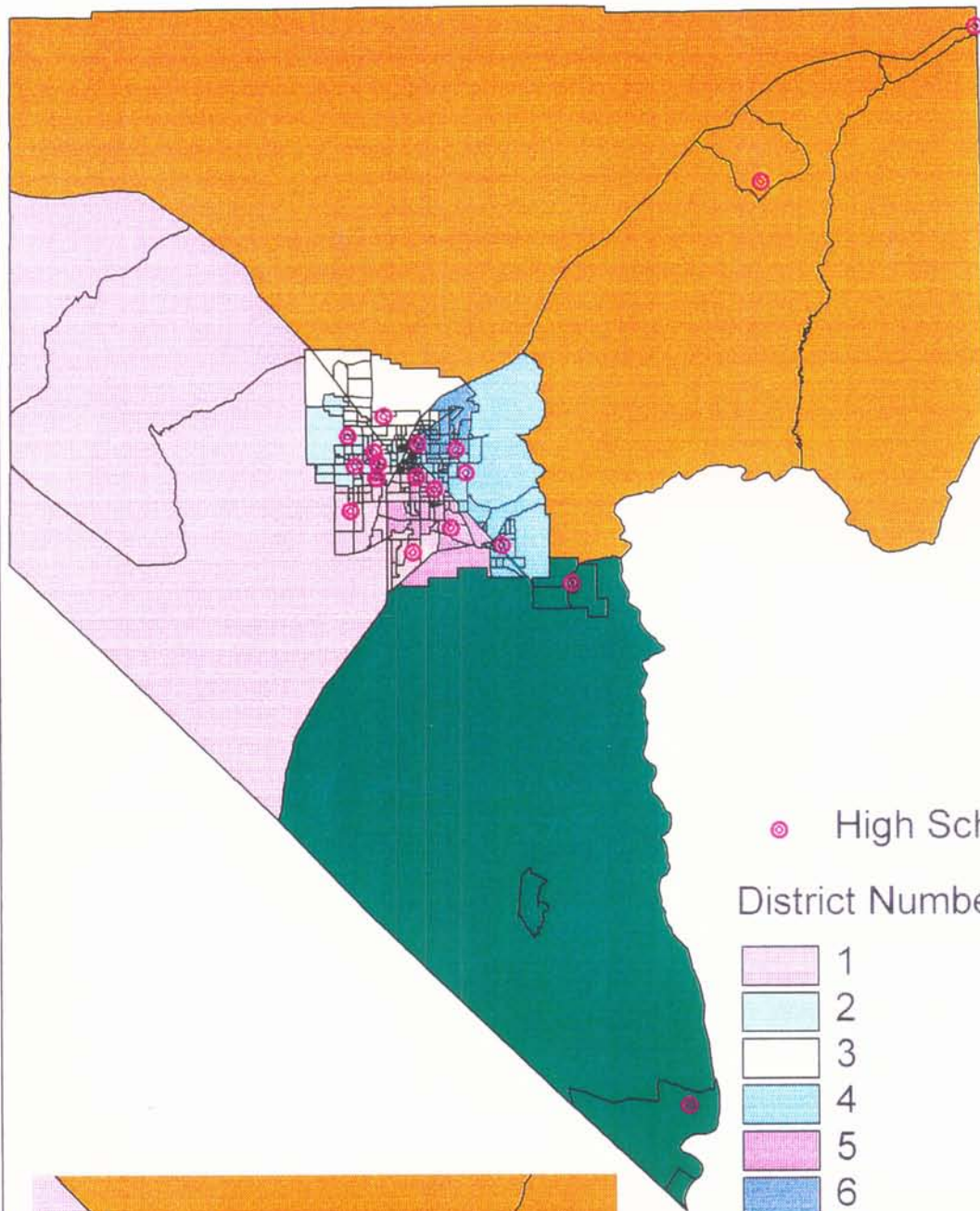


### *Secondary School(s) Cluster Boundary Model for Clark County*

Each secondary school, and its attendant elementary and middle “feeder” schools, might comprise a logical grouping. This pattern coincides with at least one definition of “community of interests,” namely all of those who rely upon a common high school. It also tends to create districts which fall well within the parameters of scale economy research results.

However, in Clark County, enrollment growth and student mobility create challenges to stability which suggest that a single high school and feeder school model may be too small and, hence, too restrictive. To compensate for these conditions, MAP chose an alternative constructed of paired high schools, geographically contiguous, and their respective feeder schools. This, presumably, creates a district twice as large, but one which still falls within scale economy boundaries.

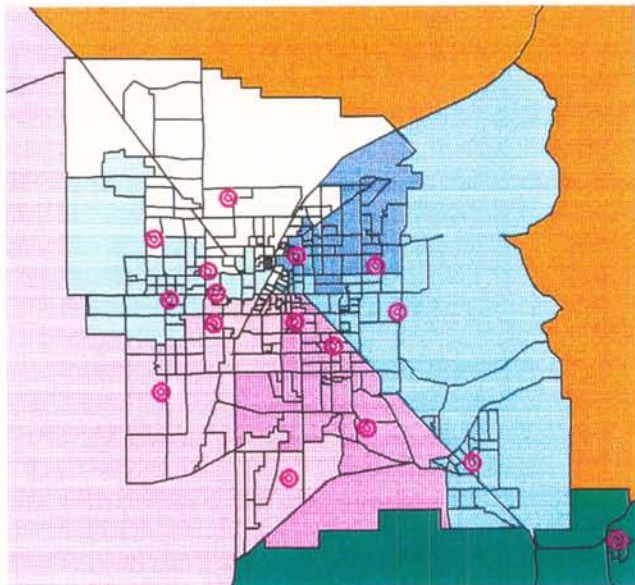
Numerous attempts to construct districts around high school attendance areas failed to yield any results that offered promise of avoiding serious racial isolation. The notion of a school district with boundaries even smaller than the two-high school model can be encompassed, at least partially, by the charter school model described in Chapter 5 of this report. See map displaying Plan A.



○ High Schools

District Number

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8



# Plan A





### *Plan B: Racially Balanced Districts*

Beginning with the hypothetical districts described in the June 11, 1996 report and the refined data base, MAP attempted to construct school districts which were approximately equal in enrollment and where minority students did not exceed half of the student population. The rationale for the racial criteria was that any official act that tended to isolate an identifiable ethnic group could be interpreted as *de jure* segregation.

No attempt was made to balance on assessed value. Viability of this plan is contingent upon county-wide equalization of operating revenues and statewide equalization of revenues for capital construction.

Our goal was to create approximately 10 districts, each with 15 thousand to 20 thousand students. We attempted to construct districts that were not extremely gerrymandered, that contained sufficient schools to house their populations, that were not divided by natural barriers, and had a student population comprised of at least 50 percent white students.

While minority students live throughout the county, there are a few areas of high concentration of African American and Hispanic students that make it all but impossible to create as many as 10 districts that are contiguous and reasonably compact. Therefore, despite extensive efforts to meet all of the criteria, eight, somewhat larger districts were constructed. These districts range in size from 13,675 to 25,564 students and from 16 percent minority to just under half minority. Only four would be comprised of more than 40 percent minority students. Generally speaking, they meet the compactness criterion and all but two would appear to contain sufficient numbers of schools to house their students.<sup>61</sup>

Plan B Racially Balanced

District	Pupils	Assessed Valuation	AV per Pupil
1	19,658	\$1,492,810,059	\$75,939
2	25,564	\$2,819,685,744	\$110,299
3	21,463	\$979,211,666	\$45,623
4	21,819	\$1,331,553,988	\$61,027
5	22,200	\$2,799,766,542	\$126,116
6	24,966	\$3,688,445,063	\$147,739
7	17,464	\$4,658,863,310	\$266,770
8	13,675	\$1,669,713,021	\$122,100

<sup>61</sup> This conclusion was based on a rough calculation of high school capacity. It is possible that these boundaries would cause shortages or excesses of capacity in some cases.

Plan B Racially Balanced

District	Pupils	% Minority	White	Black	Hispanic	Asian	Amer. Ind.
1	19,658	46%	54%	22%	20%	3%	1%
2	25,564	32%	68%	10%	15%	6%	1%
3	21,463	50%	50%	17%	27%	5%	1%
4	21,819	48%	52%	14%	27%	6%	1%
5	22,200	42%	56%	28%	10%	4%	1%
6	24,966	37%	63%	7%	23%	6%	1%
7	17,464	37%	63%	9%	20%	8%	1%
8	13,675	16%	84%	3%	10%	2%	1%

*Applying the Criteria*

*Educational Effectiveness*

Isolating the impact of possible boundary changes on a relatively subjective criterion such as educational effectiveness is particularly difficult. This effort requires one to hypothesize about the results of decisions that board members, as yet unknown, will make about future educational programs. One must also speculate about the implementation of policies by administrators and teachers as yet not employed. Finally, we know from past experience that the resulting educational quality is unlikely to be uniform across all the schools in the reconfigured districts. Nevertheless, while it is impossible to predict with detailed precision, it is possible to make inferences about likely consequences.

One of the important dimensions of educational effectiveness is the capability of districts to offer a broad curriculum, with multiple offerings for students with varying preferences. Schools should be of sufficient size to offer a full array of college and university preparatory courses, as well as courses specifically designed to prepare young people for the world of work. All eight districts are of sufficient size to offer a full array of courses. As well, each would be of sufficient size to be able to offer important support services. They may not be able to offer the degree of specialization in support services which Clark County currently provides, although there are a variety of cooperative arrangements the districts could employ to continue any regional or specialized program they currently enjoy.

Another important education-effectiveness criterion is the ability of a district to respond to student needs by offering such programs as "Magnet Schools." There are currently six Magnet Schools in the Clark County School District. They are popular and it was reported to MAP that there is a waiting list for each. Approaches such as Magnet Schools and Theme Schools are more

difficult to offer in smaller organizational units because the district's student body may be of insufficient size to fill a theme school. On the other hand, smaller organizational units may be more capable of responding to the individual needs of students within each school, thus making magnet or theme schools less necessary. Magnet Schools used to compensate for segregated housing patterns could be continued under a joint powers agreement among cooperating districts.

A third important dimension of educational quality is the capability of a district to build a coherent set of educational goals and establish a program with strong community support. These kinds of programs tend to be easier to implement in smaller, more homogeneous districts than in larger, more diverse ones. The likelihood of such an occurrence is enhanced as the number of districts proposed to be created out of the existing district is increased. That is, it would probably be easier to establish coherent, agreed-upon educational goals in smaller, more homogeneous communities. Large districts, with diverse populations, understandably find it more difficult to arrive at these kinds of agreements than might a smaller unit.

Another dimension of quality of schools is the ability to recruit, train and retain skilled teachers and administrators. On this dimension, larger size enjoys some advantages. Larger districts, tend to have greater capacity to devote resources to teacher recruitment, training, and retention. This, of course, is a highly desirable trait for communities which are constantly undergoing the pressures of additional students and the concomitant need for additional teachers. However, all eight districts should be of a size sufficient to recruit able teachers successfully.

#### *Racial And Ethnic Composition*

These districts were created in a manner calculated to minimize racial and ethnic isolation. No district is comprised of a minority population equal to or greater than the white population. At the last meeting of the Subcommittee, the question was raised as to whether districts drawn in such a manner made the state more vulnerable to legal challenges. The short answer is that there are too many unknowns to predict the likelihood of a legal challenge to the boundary changes described under this plan or the likelihood of the plaintiffs prevailing if one were brought. In the first instance the facts of this situation are unique. Secondly it is not known if the large body of case law based on Brown vs. Board of Education or the more recent Supreme Court decisions relating to gerrymandering of congressional districts would play more prominently.

Applying the recent Supreme Court rulings on the drawing of congressional districts to the Clark County school district reorganization by analogy may be possible under certain conditions, but the Court decisions involved a

somewhat different and self-contained issue: the classification of voters into new districts to achieve a racial majority in some districts to address population changes and past discrimination, and violations of the Voting Rights Act, as well as violations of the Fourteenth Amendment.

The U.S. Supreme Court decisions in question are Shaw v. Hunt (Shaw II) (June 13, 1996) and George W. Bush, Governor of Texas, et.al. v. Lawson (June 13, 1996), the latest in a series of appeals to the Court involving challenges to racial gerrymandering of state congressional redistricting undertaken by the state legislatures after population increases resulted in additional congressional seats being awarded to these states. The plaintiffs filed the suits alleging that many of the new districts in North Carolina (Shaw) and Texas (Bush) violated the Equal Protection Clause of the Fourteenth Amendment because the re-districting plans classified the voters by race.

In the Shaw opinion, the Court noted that in Miller v. Johnson (1995) 515 U.S., a racially gerrymandering districting scheme, *like all laws that classify citizens on the basis of race, is constitutionally suspect*. This is true whether or not the reason for the racial classification is benign or the purpose remedial. When applying equal protection principles in the voting-rights context, a legislature may be conscious of the voters' races without using race as a basis for assigning voters to districts. The constitutional wrong occurs when race becomes the dominant and controlling consideration. In Shaw, the Court noted that racial classifications are antithetical to the Fourteenth Amendment, whose central purpose was to eliminate racial discrimination from official sources in the States.

Under the strict scrutiny standard, the state would have to show that drawing racial distinctions in redistricting is in pursuit of a "compelling state interest" and that the means chosen to accomplish that compelling state interest must be specifically and narrowly framed to achieve it. A state's interest in remedying the effects of past or present racial discrimination may in the proper case justify use of racial distinctions, but as the Court noted in Shaw, for an interest to rise to the level of a "compelling state interest" it must satisfy two conditions: (1) the discrimination must be identified as discrimination and (2) the institution that makes the racial distinction must have had a strong basis in evidence to conclude that remedial action was necessary before it embarked on an affirmative action program.

The above discussion notwithstanding, two attorneys with whom MAP consulted, both familiar with school desegregation law, opined that Brown v. Board of Education and relative case law probably was more applicable in this instance.

## *Organizational Scale*

School district efficiency depends on several variables—size is just one. However we do know that the most costly districts to operate are districts that are either very large or very small. Districts with fewer than 400 students and those in excess of 50,000 students define large and small in these circumstances. All eight districts fall well within the band of size likely to enjoy economies of scale.

A concern frequently expressed about creating some number of smaller districts is that redundant administrations would be more costly overall and take money from the instructional program. Certainly, there will be some marginal transition costs in the short term if new school districts were created; but it may not be in the State's best interest if these districts were significantly more costly to operate. Therefore the following analysis was conducted to help us understand the ongoing administrative costs of smaller districts.

While it is not possible to predict with any degree of precision the behavior of independent school districts, each with its own decision-makers, a useful comparison can be drawn by examining the behavior of Washoe County. Washoe is a reasonable comparison since it operates under the same state laws and regulations and it is of a size not dissimilar from the districts that would result from this option. Analogies to districts in other states are more difficult because of varying state laws that can shape behavior in very different ways.

All school districts employ some number of licensed personnel who do not actually teach. Some of these do work in the schools with children and teachers. These would include pupil and school service personnel and principals. Others are strictly supervisory and include directors, supervisors, assistant superintendents, and the superintendent.

The results of this comparison are mixed. Clark County spends less per student on overall administration (\$378 vs. \$398). In both school districts about 13 percent of all licensed personnel are assigned to non-teaching roles. Clark County spends a greater portion of its budget for licensed employees on staff not engaged in teaching (21% vs. 17.5%). Also, in Washoe more than twice as many of the non-teaching employees work in the schools. Similarly, Clark spends a much greater portion of its payroll (3.3% vs. 1.6%) on supervisors and administrators who are less likely to work directly with students and teachers in the schools. The reasons for these differences are not apparent; nor would it be fair to conclude that one allocation would be



appropriate in both settings; but it does seem fair to conclude that smaller districts will not automatically cost more for administration.<sup>62</sup>

### *Government Responsiveness and Community Cohesion*

This set of District alternatives would result in mixed impact on the dimension of community cohesion. In some areas, such as Henderson and Boulder City, a new district probably would score highly on this dimension. District 1 might be perceived as neutral in the more remote areas, but somewhat suspect in the northern fringe of the urban area. Districts 3 and 4 may even split groups who identify themselves as a community.

It is important to note that the mere reduction in size of this very large district would, in most cases, benefit citizen access to government. Citizens would be represented by larger numbers of trustees, and for most of them the central office of the new district would be geographically closer, and more accessible, to them. Thus in terms of governmental responsiveness this plan almost certainly would be an improvement over the current situation.

### *Financing and Facilities*

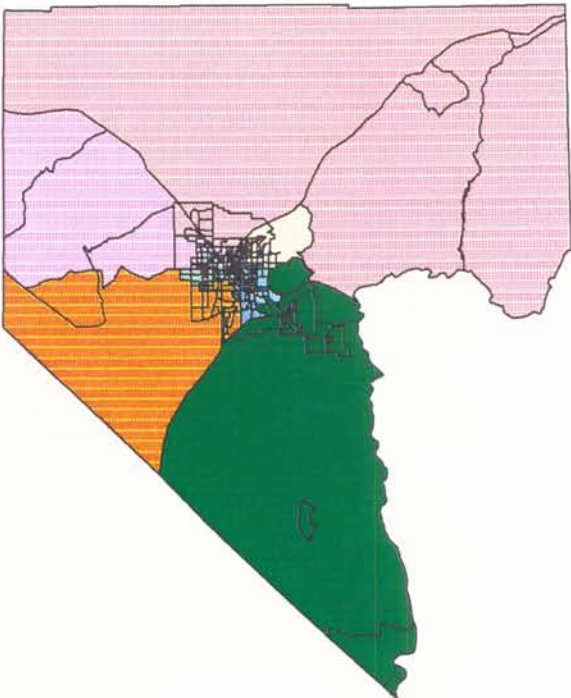
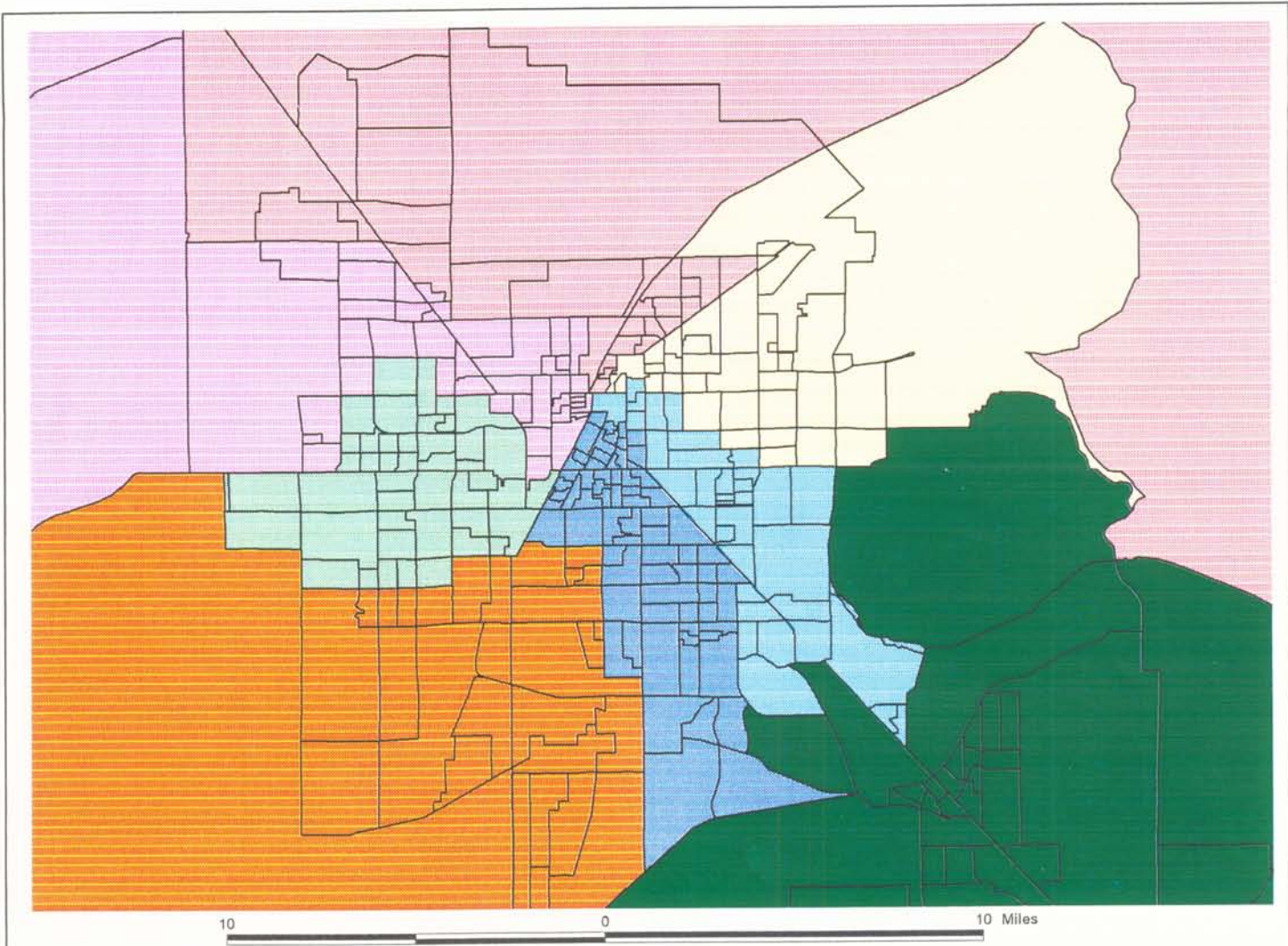
The larger the geographic area over which revenues are generated, the less likely it is that substantial inequities between districts will result. The large size of Clark County allows pockets of very high property values to be balanced by areas of very low assessed value which occur in other parts of the county. Equally troubling are the disparities which are currently also leveled out on sales tax collections. The range between high and low sales tax revenues currently generated is also substantial. This leveling-out process becomes much more difficult as the area in question becomes smaller and smaller. Nevada's school finance plan is highly equalized, ensuring that for the vast number of students in the system, there is little wealth-based disparity. However, since both assessed value and the sales tax play important roles in determining a district's relative wealth and its status as a district which falls within the equalization provisions of the Nevada Plan, a major concern has to be the distribution of assessed value and sales tax collections. Areas which combine high assessed value with high sales tax revenues would make significant portions of Clark County no longer subject to the equalization features of the Nevada Plan. This would substantially increase state costs and perhaps lead to litigation regarding the school finance features of the Nevada Plan.

The legislature could correct for financial inequalities, and ensure that the state's commitment to equalization would continue, by requiring both the

<sup>62</sup> Computed from data reported in Nevada Department of Education, Research Bulletin, Student Enrollment and Licensed Personnel Information, Volume 37, February 1996.

sales tax and property tax to continue to be levied on a county-wide basis and then returned to the proposed new districts on a per-pupil basis. This type of feature would protect the state from creating districts which would not be subject to equalization features of the Nevada Plan, thus increasing state costs. In addition, some state assistance for capital outlay purposes could mitigate against the inequalities caused by assessed-value differences.

Discussed elsewhere in this report is the apparent need to address statewide disparities in revenues for capital outlay. If the state were to adopt some form of equalization for these expenditures, differences among the eight districts in assessed valuation per pupil would be moot. Without such legislation, the new districts would be characterized by very large differences in their ability to build and maintain schools. These differences would not only be unfair but would quite likely invite law suits. See map displaying Plan B.



**District**

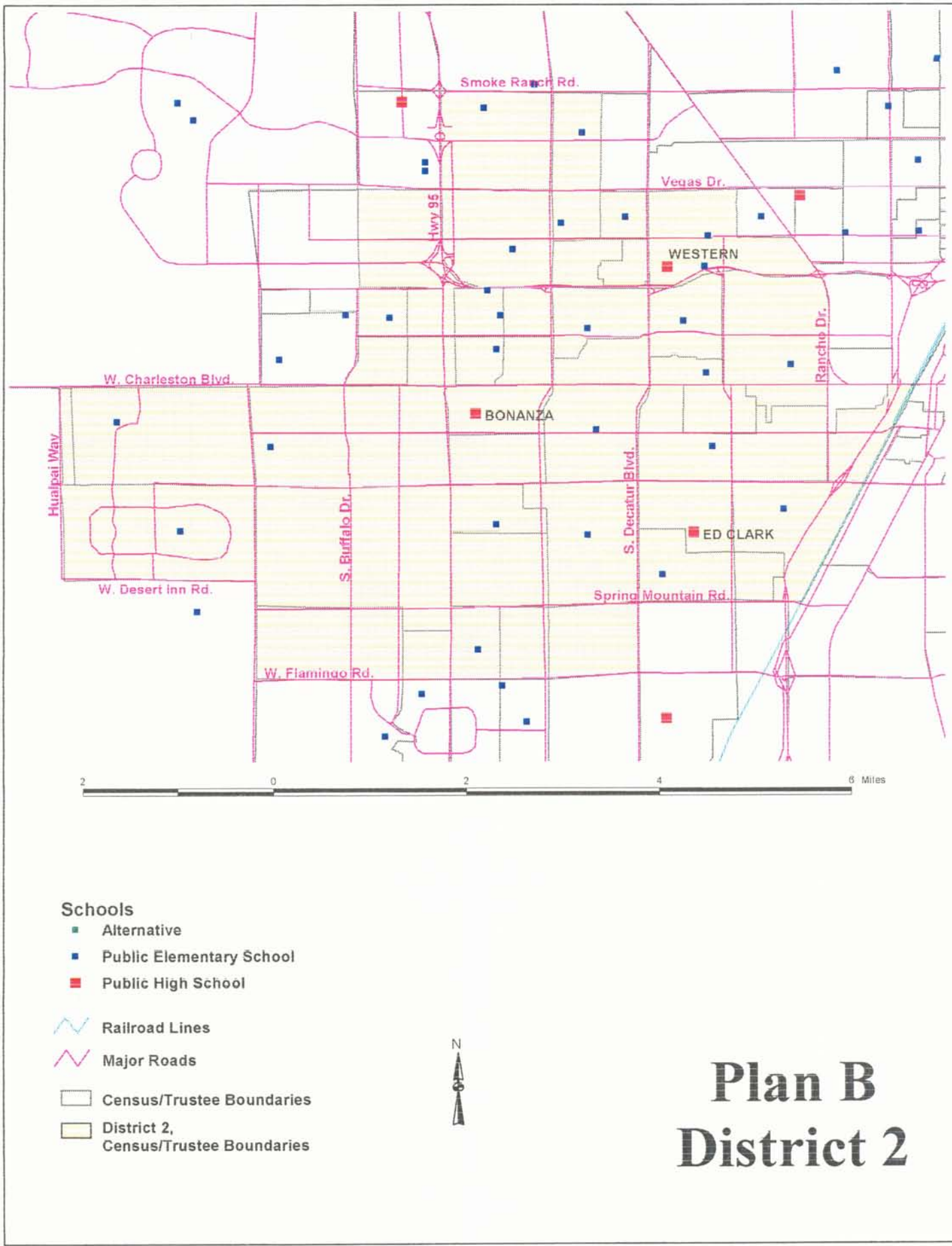
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**Plan B**





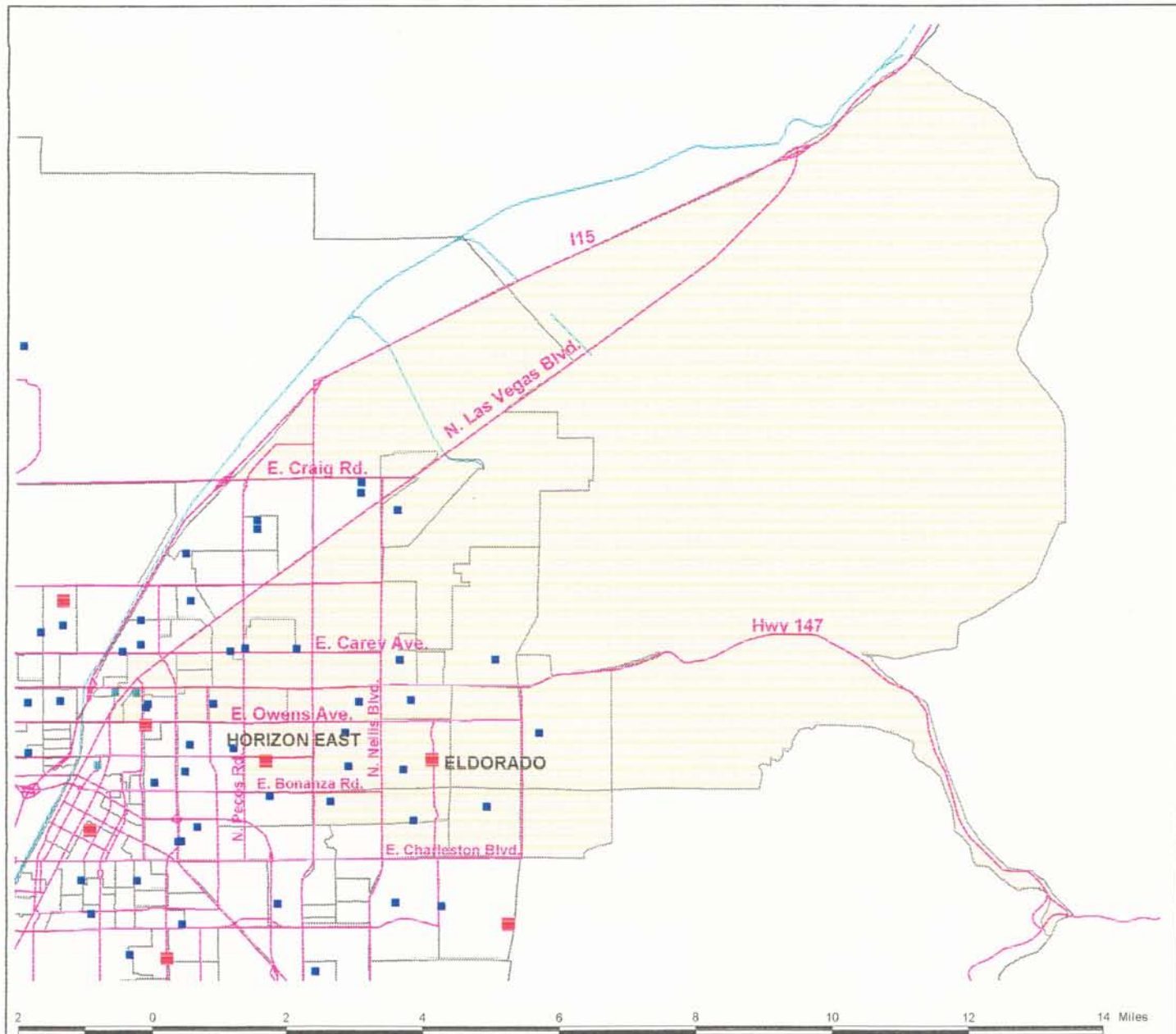


- Schools**
- Alternative
  - Public Elementary School
  - Public High School
- ~ Railroad Lines
- ~ Major Roads
- Census/Trustee Boundaries
- District 2, Census/Trustee Boundaries



# Plan B

# District 2



**Schools**

- Alternative
- Public Elementary School
- Public High School

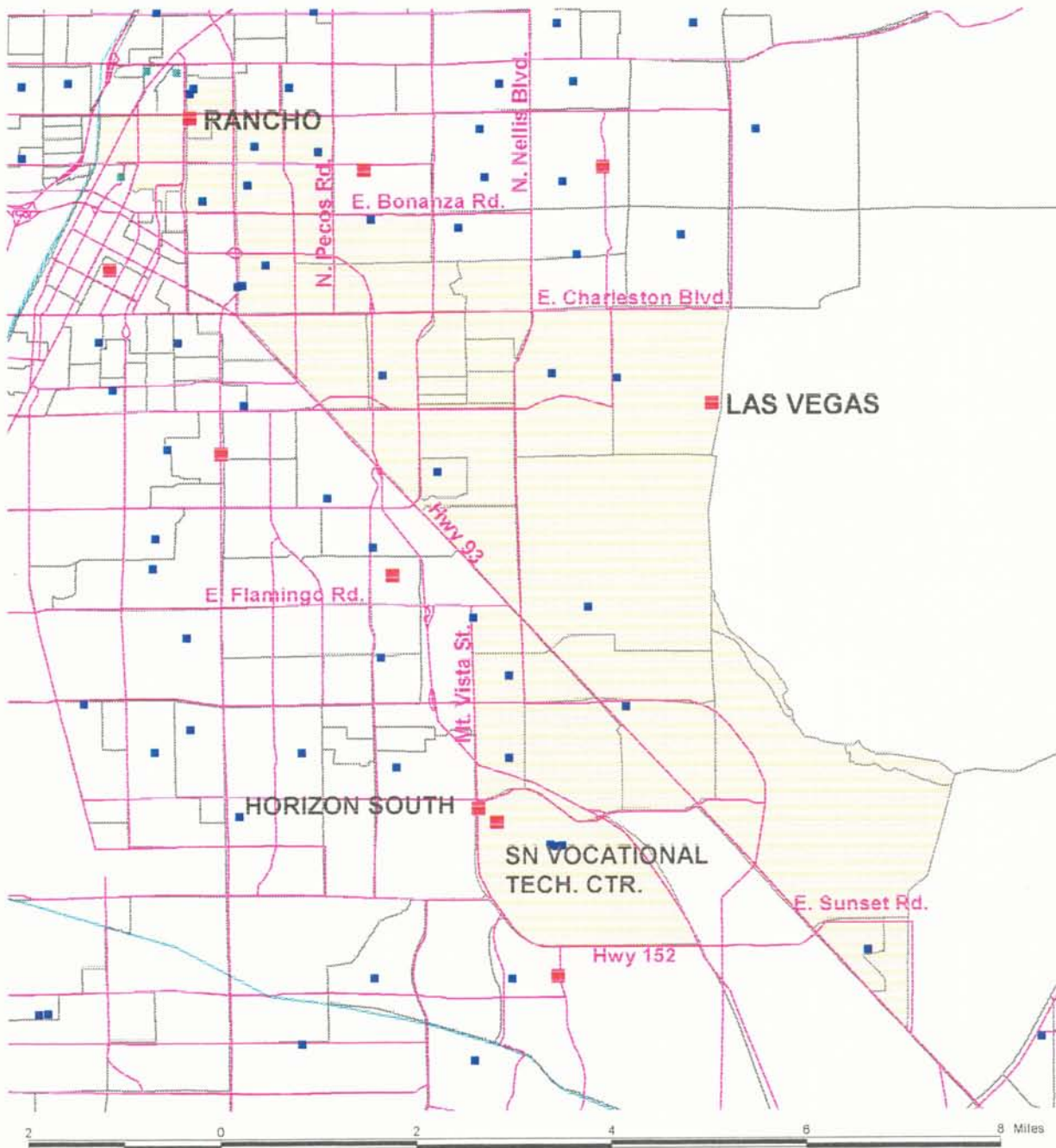
- Railroad Lines
- Major Roads

- Census/Trustee Boundaries
- District 3, Census/Trustee Boundaries



# Plan B District 3





**Schools**

- Alternative
- Public Elementary School
- Public High School

— Railroad Lines

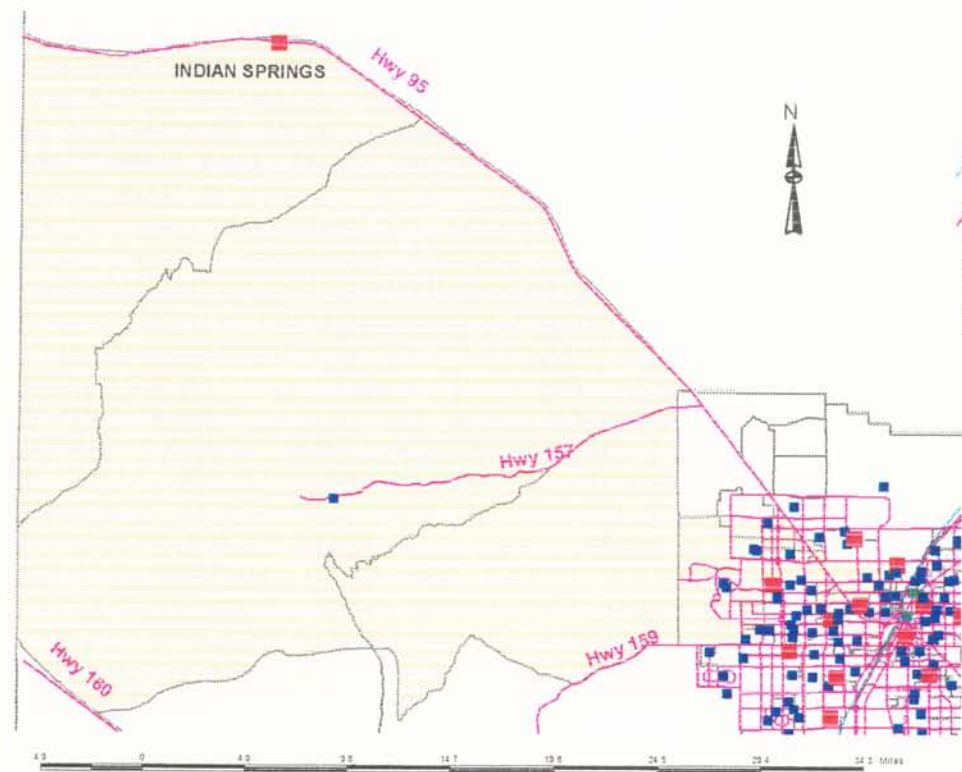
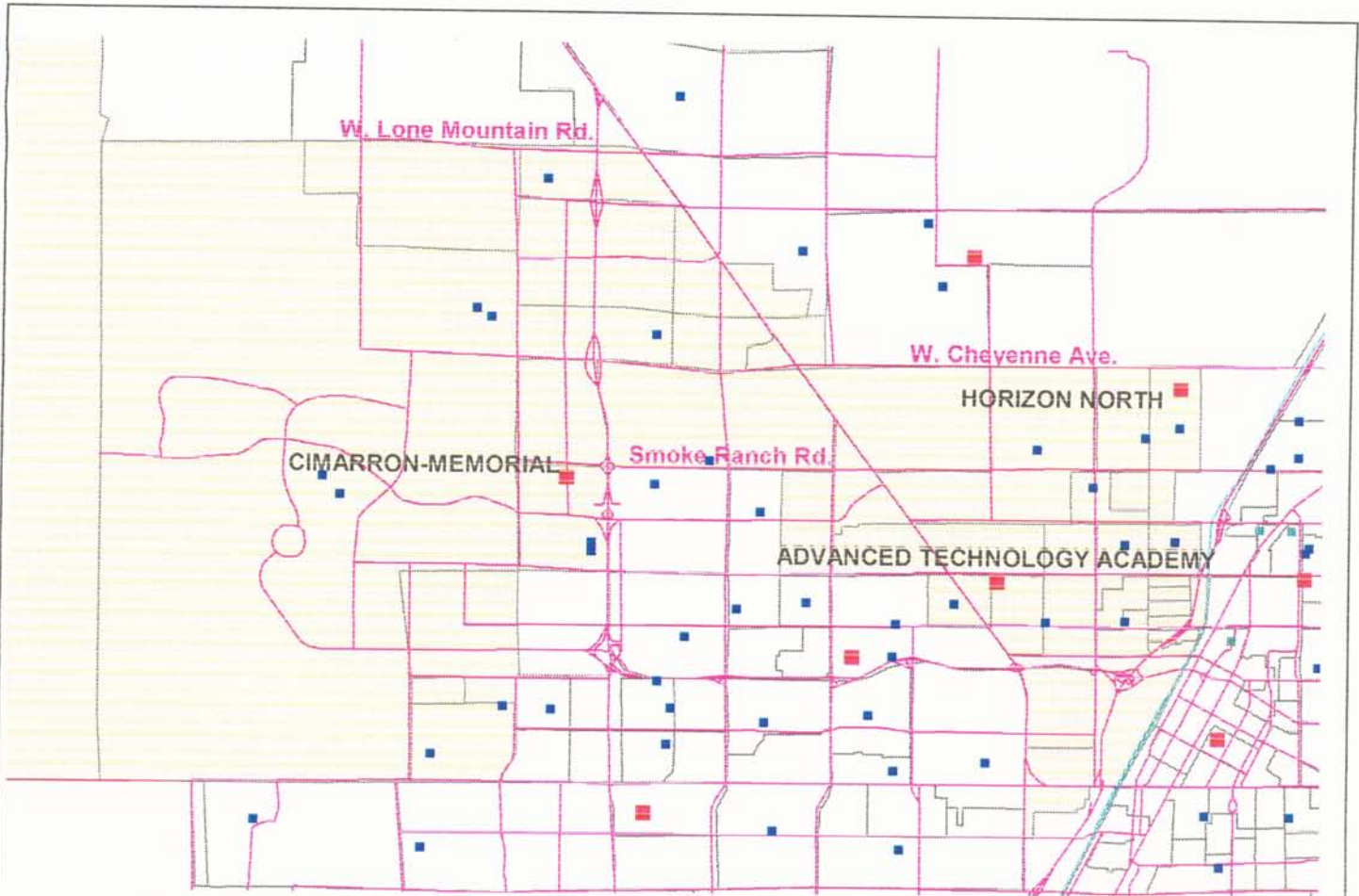
— Major Roads

□ Census/Trustee Boundaries

□ District 4, Census/Trustee Boundaries



# Plan B District 4



**Schools**

- Alternative
- Public Elementary School
- Public High School

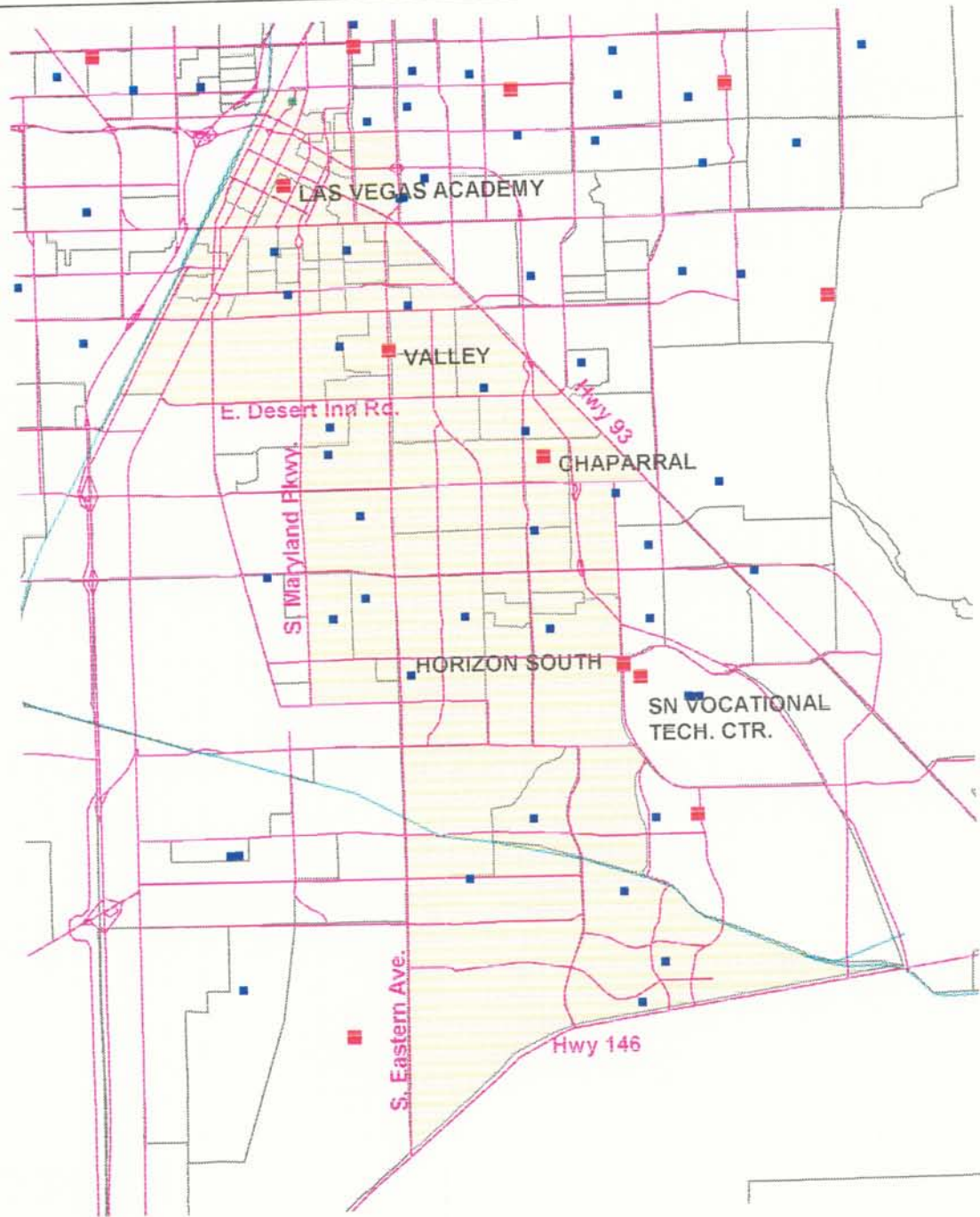
- Railroad Lines
- Major Roads

- Census/Trustee Boundaries
- District 5, Census/Trustee Boundaries



# Plan B District 5

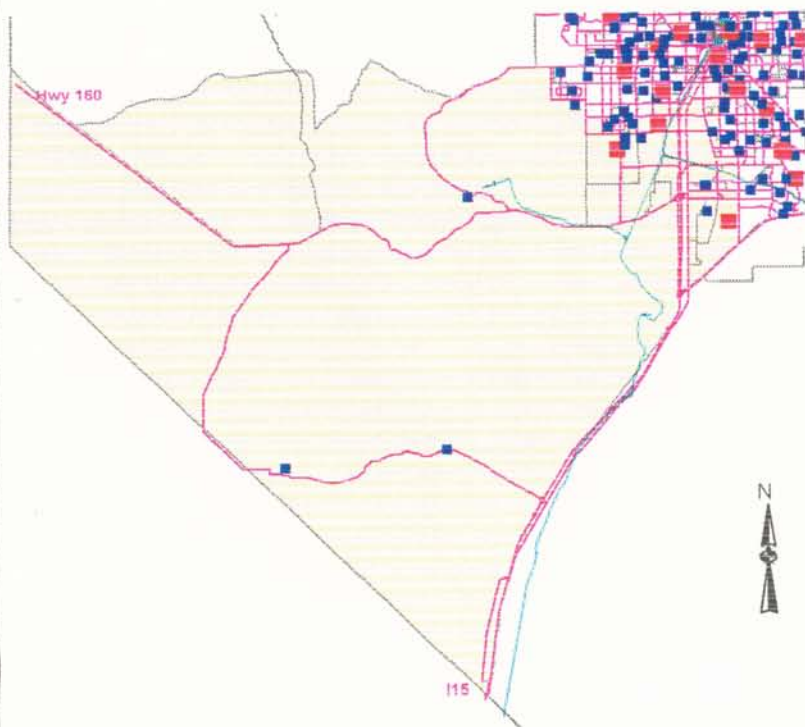
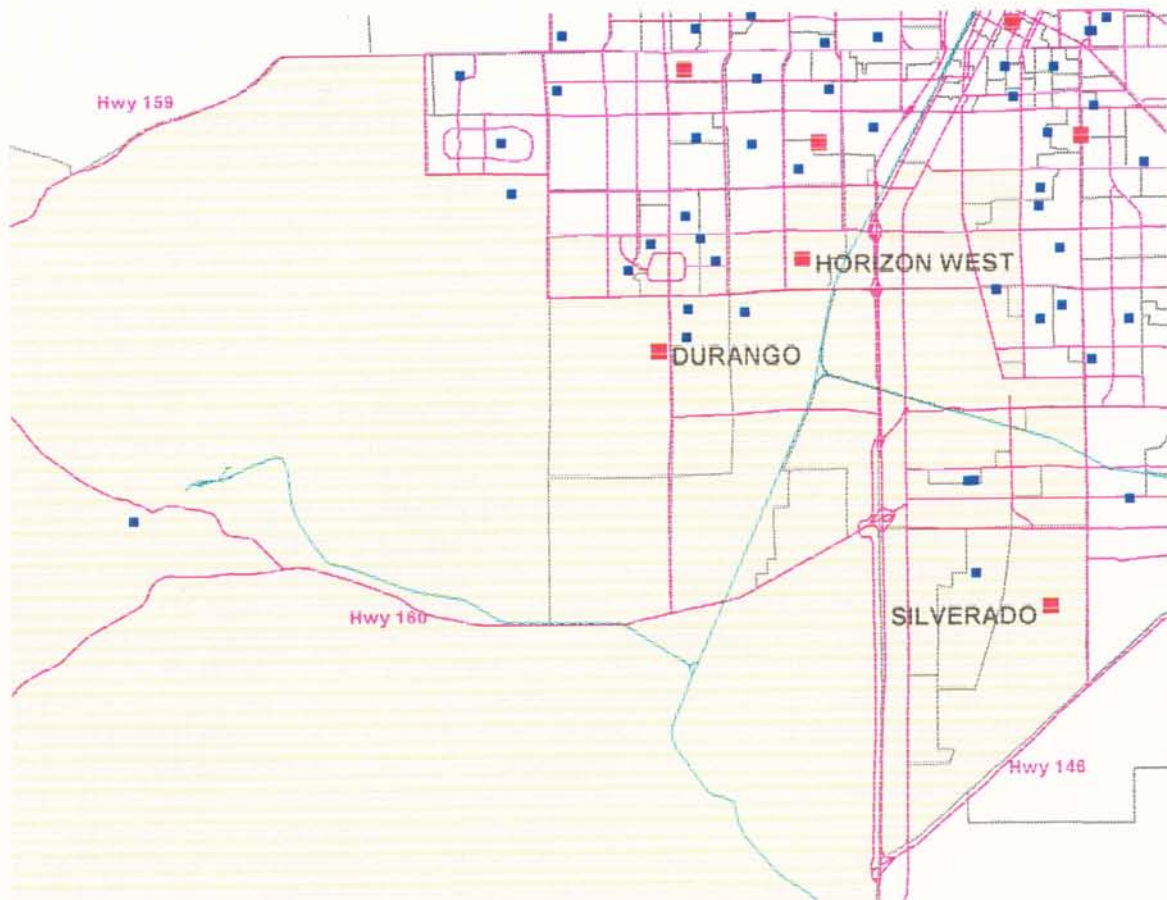




- Schools**
- Alternative
  - Public Elementary School
  - Public High School
- Railroad Lines
- Major Roads
- Census/Trustee Boundaries
- District 6, Census/Trustee Boundaries



# Plan B District 6



**Schools**

- Alternative
- Public Elementary School
- Public High School

— Railroad Lines

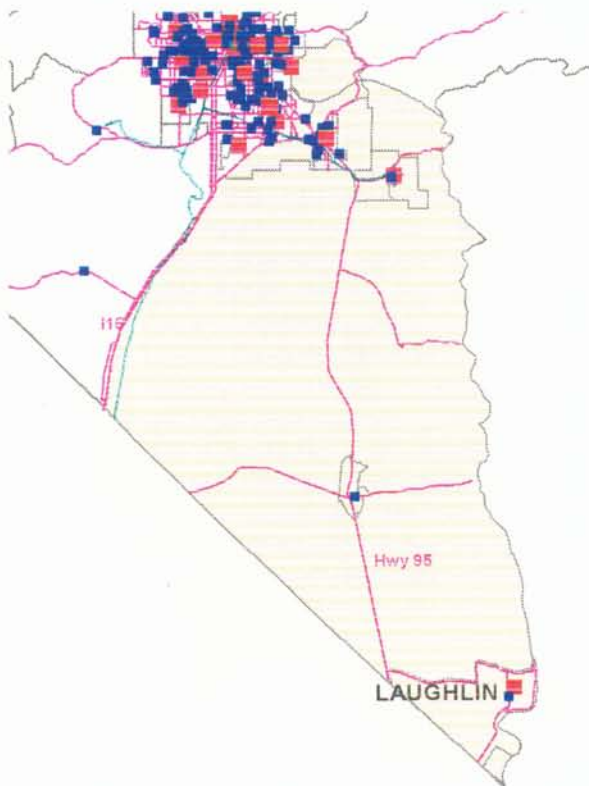
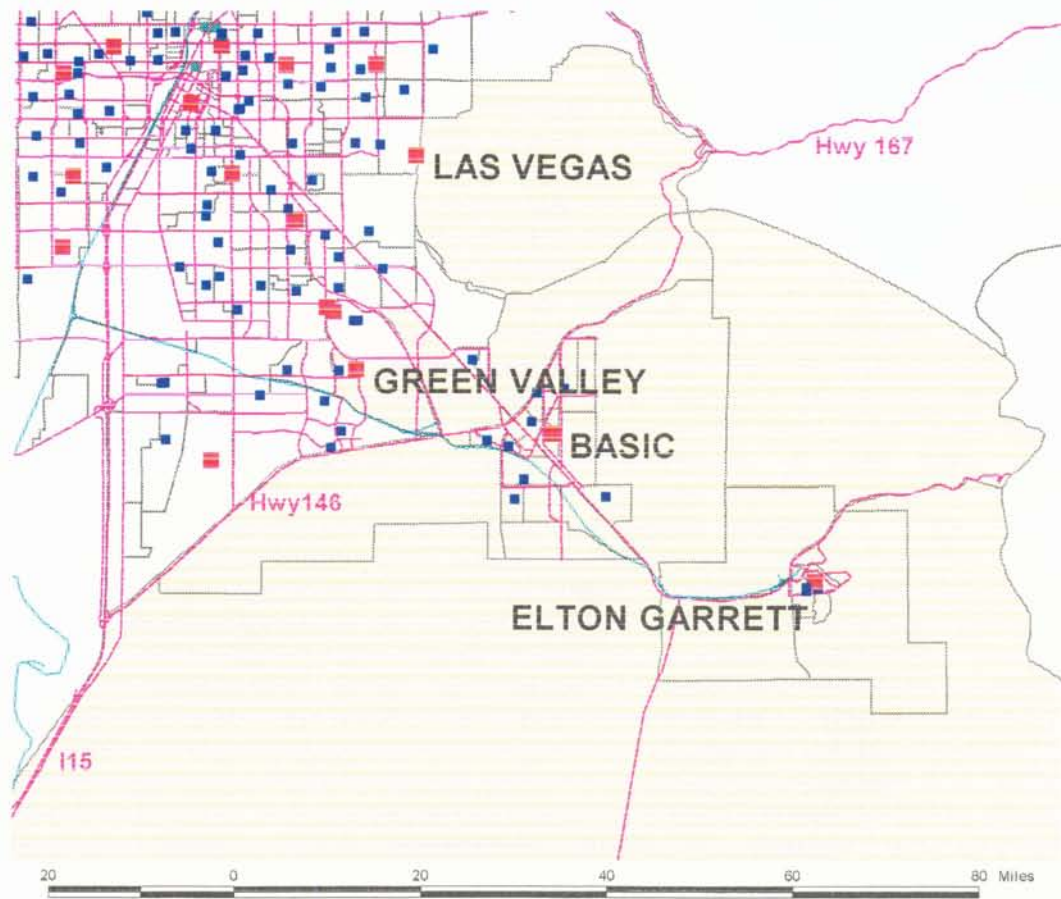
— Major Roads

□ Census/Trustee Boundaries

□ District 7, Census/Trustee Boundaries

# Plan B District 7





**Schools**

- Alternative
- Public Elementary School
- Public High School

— Railroad Lines

— Major Roads

□ Census/Trustee Boundaries

□ District 8, Census/Trustee Boundaries

# Plan B District 8

## Further Analysis

### Hypothetical District 1

This district would cover a huge, but mostly sparsely populated, geographic area in the northern third of the county. It would encompass the rural schools in Virgin Valley and Moapa Valley and the area around Cheyenne High School in the urban Las Vegas Valley area. The possible disadvantages of the proposed district are that it covers such a large geographic area, that the two population centers are so far apart, and that the two groups would seem to be distinct and different communities of interest. The total enrollment would be approximately 19,658. Minorities would comprise 46 percent of the student population and the largest minority group would be African American, at 22 percent. Hispanics would make up another 20 percent.

### Hypothetical District 2

District 2 would be located in the urban area, bounded on the north by Smoke Ranch Road, on the south by Flamingo Road, Hualpai Way on the west and the rail line on the east. The total enrollment would be approximately 25,564. Minority students would comprise 32 percent and the largest minority group would be Hispanic, at 15 percent. African Americans would make up another 10 percent. It would encompass Bonanza, Western, and Clark High Schools, which would seem to provide adequate capacity for this population.

### Hypothetical District 3

District 3 would be concentrated in the northeast corner of the Las Vegas Valley area. Most of the large geographic area contained in this district would be uninhabited. Total enrollment of the district would be 21,463, with a minority population of slightly less than 50 percent. The largest minority group would be Hispanic, at 27 percent. African Americans would comprise another 17 percent. The only comprehensive high school in the district would be El Dorado, which would imply that this district would be viable only if an additional high school space was provided. Adjusting district boundaries to incorporate one or more additional high schools would shift the space shortage elsewhere, create a majority minority district, or both.

### Hypothetical District 4

District 4 stretches southeast to northwest along Highway 93 from south of East Sunset Road to Ranch High School on the north. The total enrollment would be 21,819. Minority students would comprise 48 percent of the student population and the largest minority group would be Hispanic, at 27 percent. About 14 percent of the students would be African Americans. In addition to Rancho, the district would contain Las Vegas High School. These two

schools would appear to provide adequate capacity to house the district's population.

#### **Hypothetical District 5**

District 5 stretches from I-15 in the core area to the western border of the county. The student population would be 22,200. The minority population would be 42 percent, with African Americans, at 28 percent, as the largest minority group. Hispanics would make up another 10 percent of the minority population. One important concern about this district would be the potential need for additional schools to house the growing student population. The only comprehensive high school to be contained in this district would be Cimarron Memorial.

#### **Hypothetical District 6**

District 6 would lie north and south from I-15 to Highway 146. Total enrollment would be approximately 24,966. Hispanics would comprise the largest minority group, at 23 percent. (All minorities would make up 37 percent of the student body.) African Americans would add another 7 percent and Asians an additional 6 percent. Chaparral and Valley High Schools would be located in this district. Both of these schools are high-capacity, but would barely house the student population in this district. Future need for high school space seems likely.

#### **Hypothetical District 7**

District 7 would be concentrated in the Las Vegas Valley, but would also cover the sparsely populated area bounded by Highway 159 on the north, I-15 on the south and the California border on the west. Total enrollment would be 17,464, including 37 percent minorities, with Hispanics being the largest minority group at 20 percent. This district, as currently constructed, would contain Durango and Silverado High Schools. Combined, these two schools would seem to offer more than enough capacity to house the district's students.

#### **Hypothetical District 8**

District 8 would cover the southern third of Clark County, with Henderson being the largest population center. Between Henderson on the north and Laughlin in the south there is very little population. This district would preserve an identifiable community of interest around Henderson and Boulder City. At 13,675 students, this would be the smallest of the eight districts. It would include approximately 16 percent minorities, with Hispanics, at 10 percent, being the largest minority group. In addition to Laughlin High School, this district would contain Green Valley and Basic

High Schools. The two latter schools, located in Henderson, enjoy significantly greater capacity that would be necessary for this district.

Ideally, it would be possible to shift the capacity to Districts 5 or 3, where there would be a shortage of high school space. Unfortunately, this would only be feasible by some very creative gerrymandering, or an interdistrict attendance agreement. Another impediment to such a change would be that such an action would split an indefinable community of interest.

### *Concluding Observations*

The primary question driving this section of the study has been, is it possible to create some number of viable school districts out of the existing Clark County School District? Ideally, the resultant school districts would all score reasonably well on each of the criteria used to evaluate boundary changes. Educational effectiveness would be enhanced, or at least not be harmed by the creation of the new districts. No racial or ethnic group would be isolated; the new districts would be of a size that would maximize economies of scale; and citizens would enjoy greater access to decision making concerning their schools. The process should, at the very least, do no harm and be reasonably invulnerable to legal challenge. It would seem fair to conclude that it is unlikely that any plan would measure up to such expectations. Also, it is fair to conclude that it may be possible to create smaller districts that score well on scale, governmental responsiveness, community cohesiveness, and maybe even educational effectiveness, but not without some risk of legal challenge based on unequal revenues or racial segregation. Other possible costs may include inadequate school facilities in some districts, at least in the short run.

Why is it so difficult? The answer lies in the extreme concentration of hotels and casinos which generate a significant portion of the property tax and sales tax that fund school operations. It lies in housing patterns, where dense clusters of Whites, Hispanics, or African Americans live. It is exacerbated by the size and location of schools. These factors twine together to form a Gordian Knot.

Some of these problems more easily yield to technical solutions than others. Inequalities related to property tax and sales tax revenues can be resolved by maintaining the county as the unit for collecting and disbursing school revenues. The state can equalize funding for capital outlays. Even where facilities are unequal, cash can compensate for differences. Other problems are more difficult to solve. Residential patterns change slowly, and most parents would prefer their children attend school relatively close to where they live. Several smaller neighborhood high schools would provide more degrees of freedom to draw new district boundaries; but Clark County high schools tend to have large enrollments and attract students from a large

geographic area, thus making it more difficult to balance districts on the basis of race and provide adequate school capacity.

The problems would probably be magnified if the decision is to proceed with a full-scale breakup of the district. A more incremental approach may allow citizens and decision-makers feel their way, to create one or two smaller districts, and to proceed further or retreat as their experience dictates. Such an approach, combined with managerial and representational changes described above, may enhance the probability of citizen satisfaction and reduce some of the risks. It is likely, also, that the risk will be lowered, and satisfaction elevated, if any changes result from citizen initiative rather than state action.

## DOUGLAS COUNTY SCHOOL DISTRICT

### District Statistical Profile

#### County Population<sup>63</sup>

1996 32,790

2000 35,630

#### School District Enrollment<sup>64</sup>

1996 7,090

2000 8,000

#### Ethnicity of Students<sup>65</sup>

	<u>1994</u>	<u>1983</u>
White	88.7%	91.8%
Black	0.5%	0.3%
Hispanic	6.5%	3.9%
Asian/P.I.	1.7%	1.3%
American Indian	2.7%	2.6%

#### Schools

High 2

Middle 3

Elementary 5

Youth Camp 1

(4 elementary schools are on year-round schedules)

Licensed Employees (full time equivalent) 455

#### Student Achievement<sup>66</sup>(Grade 4 percentile scores)

	Reading	Math	Language
State Average	51	53	57
Douglas	54	57	61

#### Student Achievement (Secondary)

	Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M
State Average	58	56	21.2	429	484
Douglas	62	59	22.1	449	490

<sup>63</sup>Nevada Demographer's Office, Bureau of Business and Economic Research, "Nevada Population Estimates (1993) and Forecasts 1994-2000", December 3, 1993.

<sup>64</sup>Douglas County School District. Reported in Final Report, "Fair Share" School Facilities Costs, September 14, 1992.

<sup>65</sup>Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>66</sup>Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.



<b>Drop-Out Rate</b>	
State Average	9.6%
Douglas	4.3%
<b>Sources of funding<sup>67</sup></b>	
Local	57.6%
State	38.8%
Federal	3.6%
<b>Wealth and Debt<sup>68</sup></b>	
Assessed Valuation per student	\$161,308
Net Proceeds of Mines per student	\$5
Total Outstanding Debt	\$34,365,659
Debt per student	\$4,847
Unused Debt Capacity	\$137,185,546
<b>Tax Rates<sup>69</sup></b>	
Debt and/or pay-as-you-go	.2950
Combined school taxes	1.0450
Highest rate in county	2.9719

Douglas County is comprised of two distinct population centers. The valley is a rapidly growing bedroom community, home primarily to people who work in Carson City and Reno. South Lake Tahoe is a separate community. In the Lake Tahoe area, population growth has been checked by restrictions on new construction. The two communities are geographically separated by a half-hour drive (in good weather) over a 7,000 foot mountain pass. Overall, the county has grown from 6,900 inhabitants in 1970 to more than 30,000 today, and is projected to grow to a population of more than 35,000 by the turn of the century.

Keeping pace with growth seems to be the largest challenge the district faces, especially in the valley. The District operates 11 schools for more than 7000 students. Virtually all of the schools in Minden and Gardnerville are at or beyond capacity. Several are on multi-track or year-round schedules. The elementary schools have large enrollments of 800—900 students. The schools at Lake Tahoe have relatively smaller, stable or slightly declining school populations, with enrollments of 364 elementary, 287 middle, and 246 high school students.

<sup>67</sup>Coleman, Caine, Matzinger & Co., Douglas County School District Financial Report, June 30, 1995.

<sup>68</sup>Thunder, D., Nevada Department of Education, Preliminary report based on school district survey, April 16, 1996.

<sup>69</sup>Ibid.

Despite the rapid growth, the District has had difficulty passing bond issues to build schools, even though its taxes are among the lowest in the state. School taxes rank thirteenth, and overall county taxes rank tenth. The last successful bond issue, passed in 1992, will fund two new schools. The District levies developer-impact fees, but still reports difficulty raising sufficient funds to meet the demand for new construction.

That part of Douglas County located in and around Zephyr Cove on Lake Tahoe is clearly a community of interest distinct from the rest of the county. It is a more or less self-contained entity where the citizens live, work, and shop. Many of the homeowners are part-time residents and many are retired. This area is separated from the valley by mountainous terrain and demographically different populations. Some citizens in this area have complained that their property taxes subsidize the faster growing valley. They claim that the District allocates inadequate resources to the repair and maintenance of the elementary, middle, and high school in Zephyr Cove. Many argue that they would be better served if they were to form a separate school district.

The proposed new district would encompass the attendance areas of Whitell High School (9—12) [enrollment 247], Kingsbury Middle School (5—8) [enrollment 305], and Zephyr Cove Elementary [enrollment 366]. The proposed new district would have an enrollment of approximately 918, projected to grow to about 1,450 to 1,500 by the year 2003—04.<sup>70</sup> Enrollment in the non-Tahoe Basin portion of the county is approximately 6,180 and is expected to increase to approximately 9,500 to 10,500 by 2003 —04

### Application of Criteria

In this section, MAP applies the five evaluative criteria to an analysis of the option of creating a new school district, as described below.

#### **Educational Effectiveness**

For this proposed organization, there is little evidence that educational effectiveness would be materially altered. Since *school* attendance areas would not be impacted by the proposed organization plan and students who reside in the Tahoe Basin presumably would continue to attend school at the same facilities, there would not be a change in distances youngsters travel to school and no change in the socioeconomic makeup of the student body. Again, because this proposal does not alter school attendance boundaries,

<sup>70</sup> School Facilities Plan for the Douglas County School District.

breadth of the curriculum may increase as the student population grows; but this could happen, as well, under the current district configuration.

From all indications, aside from the geographical separation of the Tahoe Basin and non-Tahoe Basin schools, there are only small intradistrict differences in terms of the traditional student performance measures, none of which would warrant concern. Taking a one-year snapshot of school performance, Tahoe Basin schools perform slightly better on achievement scores on the average, but non-Basin schools have slightly higher ACT and SAT scores and criterion referenced tests. In addition, although student performance data are quite similar, the programs in the schools are distinctive, representing the particular needs of the community. MAP's visits to Douglas County generated evidence that schools were permitted and even encouraged to shape programs to be responsive to their communities.

### **Racial and Ethnic Composition**

Since the school attendance boundaries are not impacted, there would be no change in the racial or ethnic composition of the schools.

### **Organization Scale**

The current district configuration falls well within the band of efficient district sizes. It does not appear to be large enough to fall prey to diseconomies of large scale, nor is it so small that it cannot enjoy some of the advantages of size. The proposed new Tahoe district, especially initially, will be relatively small and may have slightly higher administrative costs per pupil than is now the case. Over time, that disadvantage can be partially mitigated by the projected growth of the population in the Tahoe Basin. Some services which are now available from the Douglas District office may not be available to the Zephyr Cove Schools.

### **Governmental Responsiveness and Community Cohesion**

In applying this criterion, we look first to ensure that we are not breaking up an existing community of interest. It is clear that in Douglas County, the Basin and non-Basin communities view themselves as distinctive. This proposal, thus, would not disassemble an existing community of interest. The next and lesser test is to assure that the desires of distinctive communities are being met within the organizational configuration which exists. One of the ways in which school districts can mitigate insufficient responsiveness is to allow school-based decision-making sufficient to ensure that communities, and especially parents, have a strong say in how the schools which their children attend are operated.

Research confirms that parents and communities are most concerned about the schools in their immediate communities, rather than about the district as a whole. It is only when a district imposes its will on schools in such a way that parents feel their local schools are not reflecting the needs and desires of their community that attention turns to the district level. It was reported to MAP that Douglas County encourages local communities to participate in local school activities and attempts to respond to their distinctive needs. The area around Zephyr Cove would easily meet the test of being an identifiable community of interest, distinct from the balance of Douglas County.

### **Financing and Facilities**

It is on this dimension that this proposal deserves the greatest attention. We should first note that schools in the Tahoe Basin receive more revenue per child than their counterparts in the other parts of the district. This is a function of the smaller size of the schools in Zephyr Cove and is perfectly consistent with the way the school finance mechanism is designed to work in Nevada.

The Basin has relatively high property assessed value and is relatively sparsely populated. The resulting assessed value per child, which is an important component of the Nevada Plan calculations, varies hugely between the two portions of the existing district. The extent of the disparity can be displayed dramatically by noting that 12.9 percent of Douglas County students reside in the Basin but that same area contains 45.6 percent of the assessed value of the district.<sup>71</sup>

An important difference between the Basin and non-Basin portions of the County is assessed value per pupil. The average assessed value per pupil is currently \$161,308. With the proposed change, the average for the Tahoe Basin district would be almost \$600,000 per student, as opposed to the less than \$100,000 available for the balance of Douglas County. This difference in assessed value per student becomes even more critical when districts attempt to pass construction bonds. This kind of disparity would mean that citizens in the balance of Douglas County would face an almost 50 percent increase in the rate required to raise a given sum of money.

<sup>71</sup> Nevada Department of Education analysis.

### Assessed Value Per Pupil<sup>72</sup>

Area	Assessed Value	Pupils	AV/pupil
Douglas	\$ 1,143,674,698	7,090	\$ 161,308
Tahoe Basin	\$ 547,000,000	918	\$ 595,861
Bal of county	\$ 596,674,698	6,172	\$ 96,674

In addition to those differences, there will be a dramatic change in total operating revenues for the two districts, primarily created by the assessed valuation differences. Note that Stateline would be able to raise almost \$3,000 from the levy of the \$0.50 property tax. The balance of Douglas County could only raise less than \$500 with the same tax rate.

Another important component of the Nevada Plan is receipts from the Local School Support Tax (LSST). A tax imposed on sales within each county is a vital part of the Nevada Plan. Note that the disparities between areas of the County are also huge. The Tahoe Basin would receive, according to these calculations, approximately \$3,410 per pupil, while the remainder of the county would only receive \$551 per pupil.

### Local School Support Tax Per Pupil<sup>73</sup>

Area	LSST	Pupils	LSST/Pupil
Douglas	\$ 6,534,003	7,090	\$ 922
Tahoe Basin	\$ 3,130,773	918	\$ 3,410
Bal. of County	\$ 3,403,230	6,172	\$ 551

These differences are so great, and the amount of LSST and property tax revenue per pupil is so large, that the newly proposed district would no longer be eligible for state aid under the Nevada Plan.

<sup>72</sup>Thunder, D., Nevada Department of Education, Preliminary report based on school district survey, April 16, 1996.

<sup>73</sup>Nevada State Department of Education, Situational Study, "What If Stateline Area of Douglas County Should Form Separate School District?"

**Per Pupil Support<sup>74</sup>**

	Douglas	Tahoe Basin	Bal. of Douglas
Basic Support <sup>75</sup>	\$3,710	\$1,488	\$4,048
Outside Support <sup>76</sup>	\$1,177	\$5,519	\$539
Total	\$4,887	\$7,007	\$4,587

Additionally, because the assessed value per student is so high and because it is now applied over such a small area with so few students, savings that normally would accrue to the state because the taxpayers of this community are contributing to the non-Basin community would not occur. The Tahoe Basin schools would keep all of this money. Additionally, the state would be required to raise a substantial sum to fill the gap of the lost revenue to the other portion of the county. Therefore, under the provisions of the Nevada Plan, either the State of Nevada would be forced to generate the additional revenue (approximately \$2.3 million) or other districts in the state would have their aid reduced by an equivalent amount.

In school construction, the assessed value differences also have a large impact. While the school-facilities needs in the Tahoe Basin will be relatively modest over the next few years, the capacity to fund those needs will be enormous. Conversely, in the non-Tahoe Basin portion of the district, the capacity to build additional facilities will be severely constrained, requiring a 50 percent increase in tax effort to raise identical revenue.

On several of the criteria, then, the proposal to create a separate school district in the Zephyr Cove area would seem to fare well. The resultant districts would be of sufficient size to operate a viable program. There would not appear to be any deleterious effects on educational effectiveness or racial isolation. This proposal would seem to reinforce an identifiable community of interest without damaging other communities of interest. This proposal does, however, have serious disadvantages relative to fiscal equity. Moreover, such a change of boundaries would require significant additional state funding.

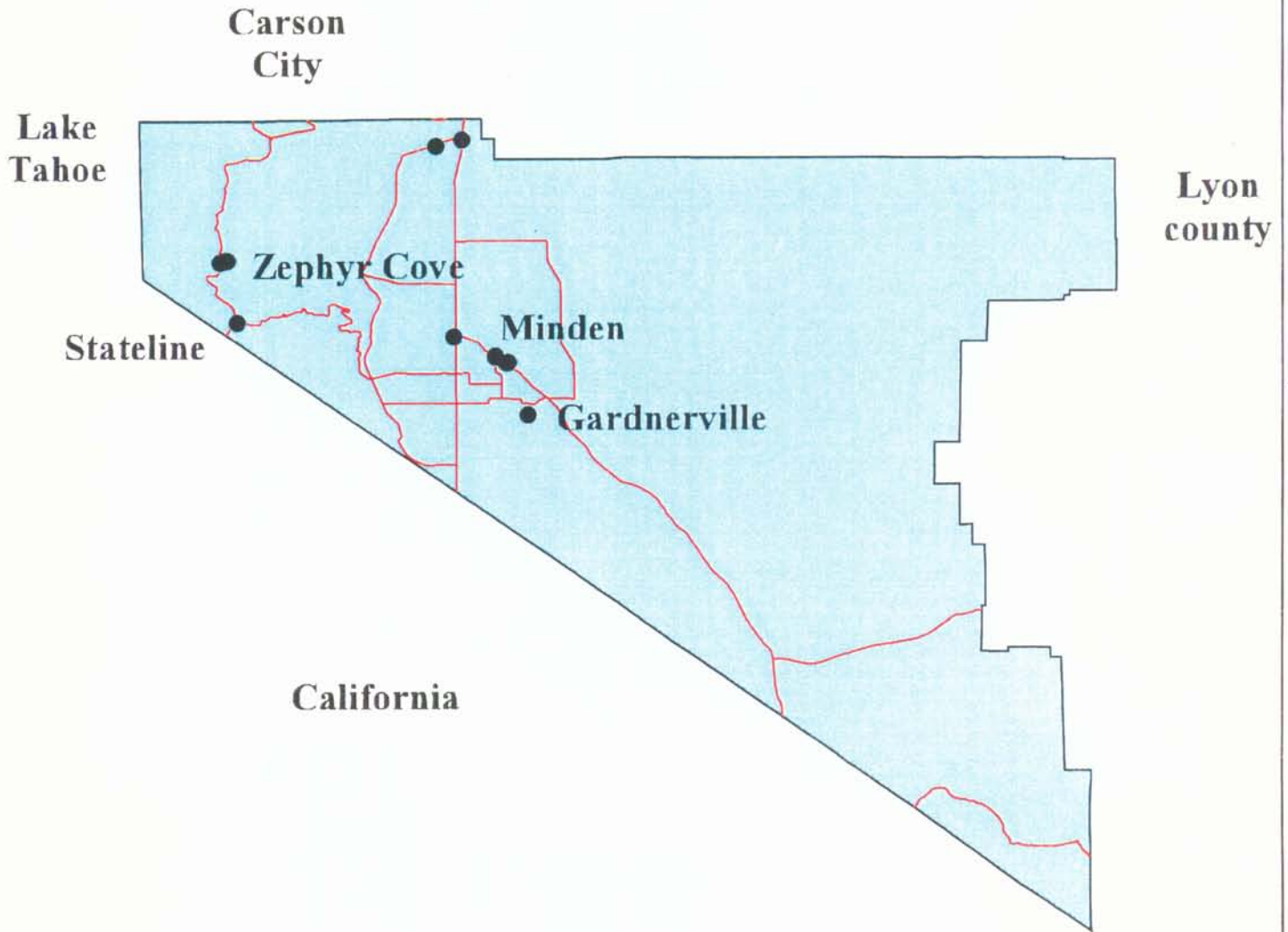
<sup>74</sup> The Nevada Plan school finance provisions require a recalculation of the Basic Support Guarantee for every district in the state any time a single district's support guarantee is altered. The figures in this chart are derived from calculations made by the Nevada Department of Education, Administrative Services unit, dated June 10, 1996.

<sup>75</sup> Basic Support includes those dollars guaranteed by the Nevada Plan formula by a combination of state and local sources.

<sup>76</sup> Revenues which fall outside the basic amount guaranteed under the Nevada Plan. The principal source of these funds is a \$0.50 ad valorem property tax levied on each \$100 of assessed valuation. Receipts from the motor vehicle privilege tax, some federal revenues, and miscellaneous local revenues make up the balance.

In order to mitigate against some of the inequities outlined above, the Legislature might wish to give consideration to a "recapture" provision, which would gather property tax receipts above a specified amount to be used by the state for general support of school districts in other counties. Continuing to collect the sales tax on a countywide basis and returning a pro rata share to districts would also serve an equalizing function. Finally, some state assistance in meeting the capital outlay needs of the districts would help reduce the negative impact of such a split on capital outlay.

# Douglas County - Schools and Major Highways





## ELKO COUNTY SCHOOL DISTRICT

### District Statistical Profile

#### County Population

1996 45,178<sup>77</sup>

2000 51,286<sup>78</sup>

#### School District Enrollment<sup>79</sup>

1996 9,861

2000 11,194

#### Ethnicity of Students<sup>80</sup>

	<u>1994</u>	<u>1983</u>
White	75.3%	76.1%
Black	0.4%	0.3%
Hispanic	16.5%	10.0%
Asian/P.I.	0.8%	1.0%
American Indian	7.0%	12.6%

#### Schools

High	6
Junior High	1
Elementary	18
Early Childhood	1

Licensed Employees (full time equivalent) 652

#### Student Achievement<sup>81</sup> (Grade 4 percentile scores)

	Reading	Math	Language
State Average	51	53	57
Elko	49	50	54

#### Student Achievement (Secondary)

	Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M
State Average	58	56	21.2	429	484
Elko	56	44	21.0	433	493

<sup>77</sup> Elko County School District, Preliminary Official Statement, September 12, 1995.

<sup>78</sup> Popoff, Carole L., "Population Forecasts and Wild Cards for Northern Nevada," Bureau of Business and Economic Research, University of Nevada, Reno, November 20, 1995.

<sup>79</sup> This is a very rough estimate predicated on assumptions that the portion of the total population being school age will remain constant through the end of the decade. It may underestimate enrollment growth, as the district has projected enrollment of 11,094 by 1998.

<sup>80</sup> Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>81</sup> Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.

<b>Drop-Out Rate</b>	
State Average	9.6%
Elko	6.9%
<b>Sources of funding<sup>82</sup></b>	
Local	47.9%
State	46.7%
Federal	5.4%
<b>Wealth and debt<sup>83</sup></b>	
Assessed Valuation per student	\$68,124
Net Proceeds of mines per student	\$1.592
Total Outstanding Debt	\$643,414
Debt per student	\$1,093.70
Unused Debt Capacity	\$89,980,964 <sup>84</sup>
<b>Tax rates<sup>85</sup></b>	
Debt and/or pay-as-you-go	0.7750
Combined school taxes	1.5250
Highest rate in county	3.0795

Elko County is located in the northeastern corner of Nevada. At just over 17,000 square miles, it is the second largest county in the state and one of the largest in the country. Approximately 71 percent of the land is owned by the federal government. The largest private landholders are mining companies and utilities. Elko is the fastest growing county in Nevada, resulting primarily from increased mining activity in nearby Eureka County. The service industry is by far the largest county-based employer, followed in order by trade, government, mining, and construction. The largest employers located in the county are the Elko County School District and Cactus Pete's Casino. The third largest employer is Independence Mining, followed by four casinos. The largest source of employment is mining located in Eureka County.

County population is projected to exceed 50,000 by the year 2000, depending, for the most part, on the level of mining employment. Citizens of Elko County tend to be younger and enjoy higher incomes than state averages. Population centers include the City of Elko, Carlin, Wells, West Wendover, Jackpot, and Spring Creek. The City of Elko is the county seat and the Elko/Spring Creek area has the largest concentration of population.

<sup>82</sup>Kafoury, Armstrong & Co., Elko County School District Financial Report, June 30, 1995.

<sup>83</sup>Thunder, D., Nevada Department of Education, Preliminary report based on district survey, April 16, 1996.

<sup>84</sup>Conversation with Marcia Bandera, Superintendent of Elko, 6/5/96.

<sup>85</sup>Ibid.

The school district operates 25 schools located throughout the county as well as an early childhood program. The bulk of the student population, however, is in Elko.

The primary issue in Elko is growth. Schools tend to be at or above capacity; and, even though new classrooms are being built as fast as the District can finance them, teachers and parents complain of large class sizes and overcrowding. More than 100 classrooms are located in portables, and at least one elementary school is comprised entirely of portable structures.

Elko has chosen to finance construction by the "pay-as-you-go" method. Because growth is so tied to mining, there is a general concern that bonds passed now, will be difficult to repay in 10, 15, or 20 years if the mines close.

Elko has entered into several inter-district agreements with neighboring counties and states. Perhaps the most contentious is at Wendover, where elementary students from both sides of the border were, until recently, educated in Nevada and secondary students were educated in neighboring Utah. Responding to the concerns of parents, Elko constructed a K—12 school, reportedly causing hard feelings between the two adjacent communities. Other border arrangements appear to involve relatively small numbers of students with few, if any, other alternatives.

A frequently expressed concern, potentially related to district boundaries, is the perceived inequity created by Eureka County mine workers living and sending their children to school in Elko County, while all of the tax revenues generated by the mines remain in Eureka. Consequently, citizens of Elko County pay the second highest school tax in the state, while their neighbors in Eureka enjoy the lowest tax rate permissible under state law.

In an attempt to address this problem, Assemblyman John C. Carpenter in 1991 introduced AB 527. This bill would have created a special tax district in Eureka County north of I—80 for the purpose of financing construction of schools in Elko County. It was reported to MAP that the legislation failed, at least in part, because it did not adequately limit the amount of revenue it would raise; nor did it specify a time limit for the duration of the special district. It was also reported that the mining companies in Eureka County have donated significant funding to Elko County School District to mitigate the full impact of the need to construct classrooms. Even so, Elko County School District continues to struggle to provide adequate housing for its burgeoning enrollment, and the citizens of Elko County shoulder a significant tax burden as a consequence.

## Application of Criteria

### **Educational Effectiveness**

At the request of the SCR-30 Subcommittee, MAP will analyze the implications of consolidating Eureka County School District with Elko County School District.

The advantages of merging the two counties clearly redound to the citizens of Elko, especially in the short term, when mine revenues are high. Elko schools would have access to greater revenues per pupil, which should make possible improvements in the school program. In addition, a merger could make available to the students in Eureka the relatively higher level of specialized support services available in Elko. Class size and overcrowding of schools in Elko could be alleviated. Textbook and technology access could be enhanced in both districts. Elko is one of the leaders among rural counties in exploring the use of technology in cooperation with the community college district. Eureka has also shown leadership in planning for technology and has enjoyed the wherewithal to acquire it.

### **Racial and Ethnic Composition**

Since the school attendance boundaries are not impacted, there would be no change in the racial or ethnic composition of the schools.

### **Organization Scale**

The current district size configuration in Eureka is well below the optimal size for a district. Merging with Elko would create a district of sufficient size to offer scale advantages. These advantages may be off-set by the substantial organizational problems created by the large area of the newly merged district.

### **Governmental Responsiveness and Community Cohesion**

In applying this criterion, we look first to ensure that the proposal does not break up an existing community of interest. This would not be the case here. However, Eureka citizens might argue that combining with Elko would cause their interests to be "swallowed" by the substantially larger population in Elko. For Eureka citizens, government responsiveness might be lessened. For Elko citizens, the extensive increase in the size of the district may divert at least some of the attention of the school board to matters in Eureka County.

## Financing and Facilities

On this dimension, the merger of the two counties would have its greatest impact. Under current law, Eureka's assessed value per pupil is so high that it is the only county in the state in which the Nevada equalization formula has no effect. In addition, Eureka, because Nevada has no recapture provision, is permitted to keep its substantial local revenue to serve county students. It is able, with very little tax effort, to raise substantial sums for school construction. Elko, on the other hand, is among the poorest counties. Every dollar it raises for school construction requires substantially greater tax rates. It has about two-thirds the assessed value of Eureka, but more than 32 times the number of pupils. By combining the two districts, the total assessed value per pupil would place the new district in the mid-range of school districts in the state.

**Assessed Value Per Pupil**

Area	Assessed Value	Pupils	AV/Pupil
Eureka	\$ 1,022,679,365	308	\$ 3,320,388
Elko	\$ 671,773,219	9,861	\$ 68,124
<b>Total</b>	<b>\$ 1,694,452,584</b>	<b>10,169</b>	<b>\$ 166,629</b>

Elko's chances of obtaining needed capital outlay funds would, on the one hand, be substantially enhanced by the addition of the tax base of Eureka County; but on the other hand, citizens of Eureka County would not enjoy sufficient numbers to control the outcome of bond elections. Eureka citizens expressed concerns that the citizens of Elko have been more willing to tax themselves to provide educational facilities and that they fear a merger with Elko would result in the taxes in Eureka being increased.

Turning next to operating resources, a merger of the two districts would have the positive effect of bringing all students in the state within the equalization provisions of the Nevada Plan. The state would save substantial revenues because the tax base of Eureka would share the responsibility for the students residing in Elko, thus replacing the state dollars currently spent for that purpose. On the other hand, revenues per student in Eureka would decline. In addition, since teacher salaries are much lower in Eureka than in Elko, some provision would need to be made to equalize them. Bringing all Elko faculty up to the Eureka salary levels would increase costs substantially.

**Per Pupil Support<sup>86</sup>**

	<b>Eureka</b>	<b>Elko</b>	<b>Elko/Eureka</b>
Basic Support <sup>87</sup>	\$1,488	\$4,048	\$3,963
Outside Support <sup>88</sup>	\$15,980	\$339	\$882
Total	\$17,468	\$4,387	\$4,785

In sum, the advantages of the proposed merger between these two districts accrue primarily to the advantage of Elko and to the State. Some economies of scale would be realized, but these could be accompanied by some loss of governmental responsiveness and community cohesion. Improvement in educational effectiveness seems likely with the additional money available to Elko and the greater specialization and program support that could be made available to Eureka. Additional school construction funds could alleviate school and class overcrowding in Elko. Of course, the many advantages of this merger would be short-lived if mining revenues should fall.

An alternative which deserves additional attention would be to revisit the special tax assessment district proposal discussed above. Under such an arrangement, a portion of Eureka's assessed value would be shared with Elko to help offset the cost of constructing schools necessary to house the children of employees of mines in Eureka County. The legislation could be tightly constrained to limit the negative impact on Eureka County while at the same time allowing citizens in Elko some relief. The legislation could address the most serious issue for the residents of Elko, which is to build additional schools. This solution would not result in the potential loss of governance responsiveness or community cohesiveness discussed above. However, this proposal would do nothing to bring Eureka into equalization aid and would generate no savings to the State.

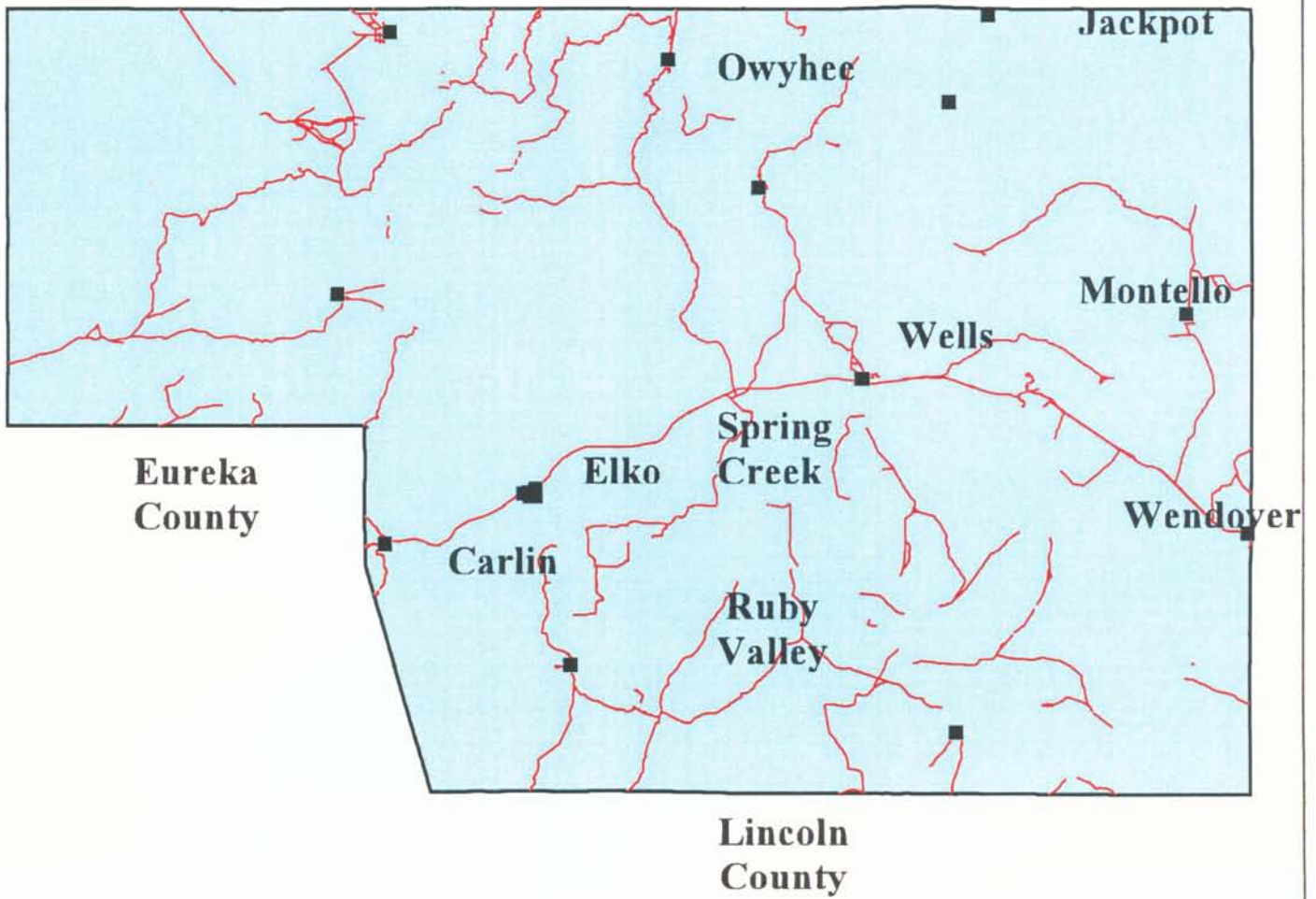
<sup>86</sup> The Nevada Plan school finance provisions require a recalculation of the Basic Support Guarantee for every district in the state any time a single district's support guarantee is altered. The figures in this chart are derived from calculations made by the Nevada Department of Education, Administrative Services unit, dated June 10, 1996.

<sup>87</sup> Basic Support includes those dollars guaranteed by the Nevada Plan formula by a combination of state and local sources.

<sup>88</sup> Revenues which fall outside the basic amount guaranteed under the Nevada Plan. The principal source of these funds is a \$0.50 ad valorem property tax levied on each \$100 of assessed valuation. Receipts from the motor vehicle privilege tax, some federal revenues and miscellaneous local revenues make up the balance.

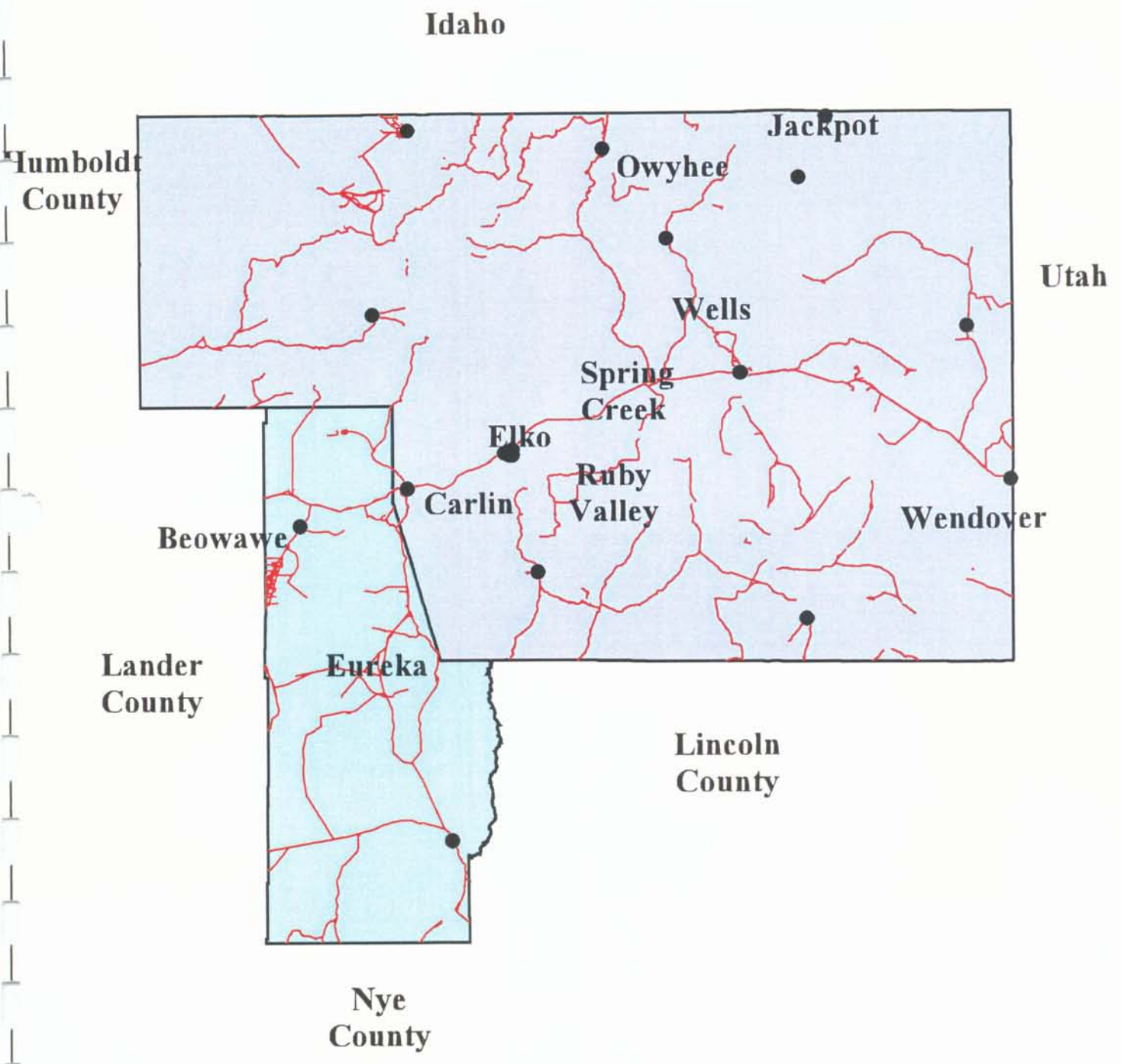
# Elko County - Schools and Major Highways

Idaho





# Elko and Eureka Counties - Schools and Major Highways





## ESMERALDA COUNTY SCHOOL DISTRICT

<u>District Statistical Profile</u>						
County Population <sup>89</sup>						
	1996	1,240				
	2000	1,220				
School District Enrollment <sup>90</sup>						
	1996	124				
	2000	124				
Ethnicity of Students <sup>91</sup>						
		<u>1994</u>		<u>1983</u>		
White		86%		90.6%		
Black		0%		0.0%		
Hispanic		6%		7.8%		
Asian/P.L.		0%		0.0%		
American Indian		8%		1.6%		
Schools						
Elementary	3					
Licensed Employees (full time equivalent)						
				13		
Student Achievement <sup>92</sup> (Grade 4 percentile scores)						
		Reading	Math	Language		
State Average		51	53	57		
Esmeralda		46	49	49		
Student Achievement (Secondary)						
		Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M
State Average		58	56	21.2	429	484
Esmeralda		48	58	—	—	—

<sup>89</sup> Nevada Demographer's Office, Bureau of Business and Economic Research, "Nevada Population Estimates (1993) and Forecasts 1994-2000, December 3, 1993.

<sup>90</sup> Total population is forecast to continue its long term trend of decline. School enrollments are likely to follow that trend.

<sup>91</sup> Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>92</sup> Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.

<b>Drop-Out Rate</b>		
State Average		9.6%
Esmeralda		---
<b>Sources of funding<sup>93</sup></b>		
Local		39.1%
State		56.8%
Federal		4.1%
<b>Wealth and Debt<sup>94</sup></b>		
Assessed Valuation per student		\$370,551
Net Proceeds of mines per student		\$31,868
Total Outstanding Debt		0
Debt per student		0
Unused Debt Capacity		\$6,892,248
<b>Tax rates<sup>95</sup></b>		
Debt and/or pay-as-you-go		0.0000
Combined school taxes		0.7500
Highest rate in county		2.7947

Esmeralda County's population has been declining steadily since the mines closed in the early part of this century. Similarly school enrollment, currently at 124, is projected to remain constant or decline for the foreseeable future. The district operates three elementary schools. The County's secondary school students attend school in nearby Tonopah in Nye County, as they have since 1926. The District employs one administrator who serves in a variety of roles ranging from "instructional leader," to business manager, to bus driver. (The evening before MAP's visit, the superintendent drove students to an out-of-town event.)

School buildings are old and largely obsolete. No recent bond election has been successful and nobody with whom MAP spoke was optimistic that future attempts would fare any better. What little capital improvement has occurred in recent years seems to have largely been the product of services donated by parents. Repairing or replacing school buildings, however, does not seem to be a problem of capacity but one of will. The residents of Esmeralda enjoy the lowest school tax rate in Nevada and one of the lowest overall tax burdens in the state. Moreover, the District is debt free.

<sup>93</sup> Daniel C. McArthur, LTD, Esmeralda County School District Financial Report, June 30, 1995.

<sup>94</sup> Thunder, D., Nevada Department of Education, Preliminary report based on district survey, April 16, 1996.

<sup>95</sup> Ibid.

Incorporation of Esmeralda Schools into the Nye County School District was suggested to MAP on several occasions. The district office in Tonopah would be no less accessible than the current district headquarters in Goldfield; and while the Nye administrative staff is not large, it could offer the benefit of expertise and specialization that is not possible with a single administrator for the whole county, no matter how capable that administrator. Esmeralda County parents would be able to participate in the election of school board members in the district where their children attend high school and fiscal economies may be realized by the elimination of redundant functions.

Esmeralda citizens who attended a MAP-conducted public meeting were adamant that they would oppose any merger with Nye County School District. Concern was expressed that existing schools would be closed and that their taxes would increase. Esmeralda County educators with whom MAP spoke were divided on the question of whether they felt the current district is viable.

### *Application of Criteria*

Because several possible district configurations are analyzed for Nye County School District, it is not possible to predict precisely the nature of the Nye County School District with which Esmeralda would be joined. Therefore, rather than analyze all of the various possibilities, we analyze only one here, the consolidation of Esmeralda with the northern portion of Nye county.

### **Educational Effectiveness**

It is extraordinarily difficult to offer quality educational programs in the small schools maintained by Esmeralda. Larger elementary schools could provide additional opportunities for these students. However, travel concerns make consolidating these small schools highly problematic.

Citizens in Esmeralda are concerned that attachment to another district would not make educational improvement more likely, and in fact that there would be no guarantee that improvement would follow consolidation. A merger with Nye would allow some additional specialized support services to be available to Esmeralda children. Articulation of the instructional program would be enhanced if both elementary and secondary were designed by a single school district. It would seem, also, that Esmeralda is the perfect example of a district that could benefit from the kind of distance learning opportunities we outline elsewhere in this report (See Appendix C on Technology.)

## **Racial and Ethnic Composition**

Since the school attendance boundaries are not impacted, there would be no change in the racial or ethnic composition of the schools.

## **Organization Scale**

The current district size configuration is well below the optimal size for a school district. This situation is not relieved by growth projections which show little or no change. Advocates of a merger with Nye point out that administrative costs could be spread over two counties instead of one and that more dollars could be devoted to the classroom. Merging with Nye County would have some clear economy of scale benefits.

## **Governmental Responsiveness and Community Cohesion**

In applying this criterion, we look first to ensure that the proposal does not break up an existing community of interest. That would not be the case here. The problem faced by the citizens of Esmeralda, when confronted with this proposal, is that benefits to the educational program are not automatic; in other words, their schools would not improve just because they have become a part of another district. Additionally, by essentially moving the center of political power to another county (in which they would constitute a minority) the citizens of Esmeralda fear that the new configuration may be less responsive to the particular needs of their small communities.

By merging the two districts, Esmeralda citizens would be able to participate in elections which effect the operation of the district in which their students attend high school. That is not now the case. Esmeralda citizens with whom we spoke argued that while that might be an advantage, any gain in participation would be outweighed by the disadvantage of becoming a small minority on issues impacting the elementary schools which their children now attend.

## **Financing and Facilities**

On this dimension, the merger of the two counties would have little effect. Both counties individually fall under the guarantees provided in the Nevada Plan and, combined, they would fall under the same provisions. They are both sparsely settled areas and although Esmeralda has slightly higher assessed value, there are so few students that it does not significantly affect the overall assessed value per student.

**Assessed Value Per Pupil**

Area	Assessed Value	Pupils	AV/Pupil
No. Nye	\$ 275,224,252	1928	\$ 142,751
Esmeralda	\$ 45,948,318	124	\$ 370,551
Total	\$ 321,172,570	2052	\$ 156,517

Esmeralda's chances of obtaining needed capital outlay funds would, on the one hand, be enhanced by the addition of the tax base of Nye County; on the other hand, citizens of Esmeralda County would not enjoy sufficient numbers to control the outcome of bond elections. Several Esmeralda citizens expressed concern that the citizens of Nye have been more willing to tax themselves to provide educational facilities. They are concerned that a merger with Nye would result in the taxes in Esmeralda being increased.

Turning next to operating resources, a merger of the two districts would not have an adverse impact on the equalization provisions of the Nevada Plan, nor should there be any significant increased burden on the state. The newly formed district would continue to be within the parameters of the Nevada Plan and the Legislature would not be establishing a disequalizing situation. The finance provisions that would accompany any reorganization could be crafted in such a way to continue current patterns of revenue. Below is a graphic display of a preliminary estimate regarding how merger would impact district revenues.

**Per Pupil Support<sup>96</sup>**

	Esmeralda/Nye	Pahrump
Basic Support <sup>97</sup>	\$4,159	\$4,394
Outside Support <sup>98</sup>	\$1,203	\$765
Total	\$5,362	\$5,159

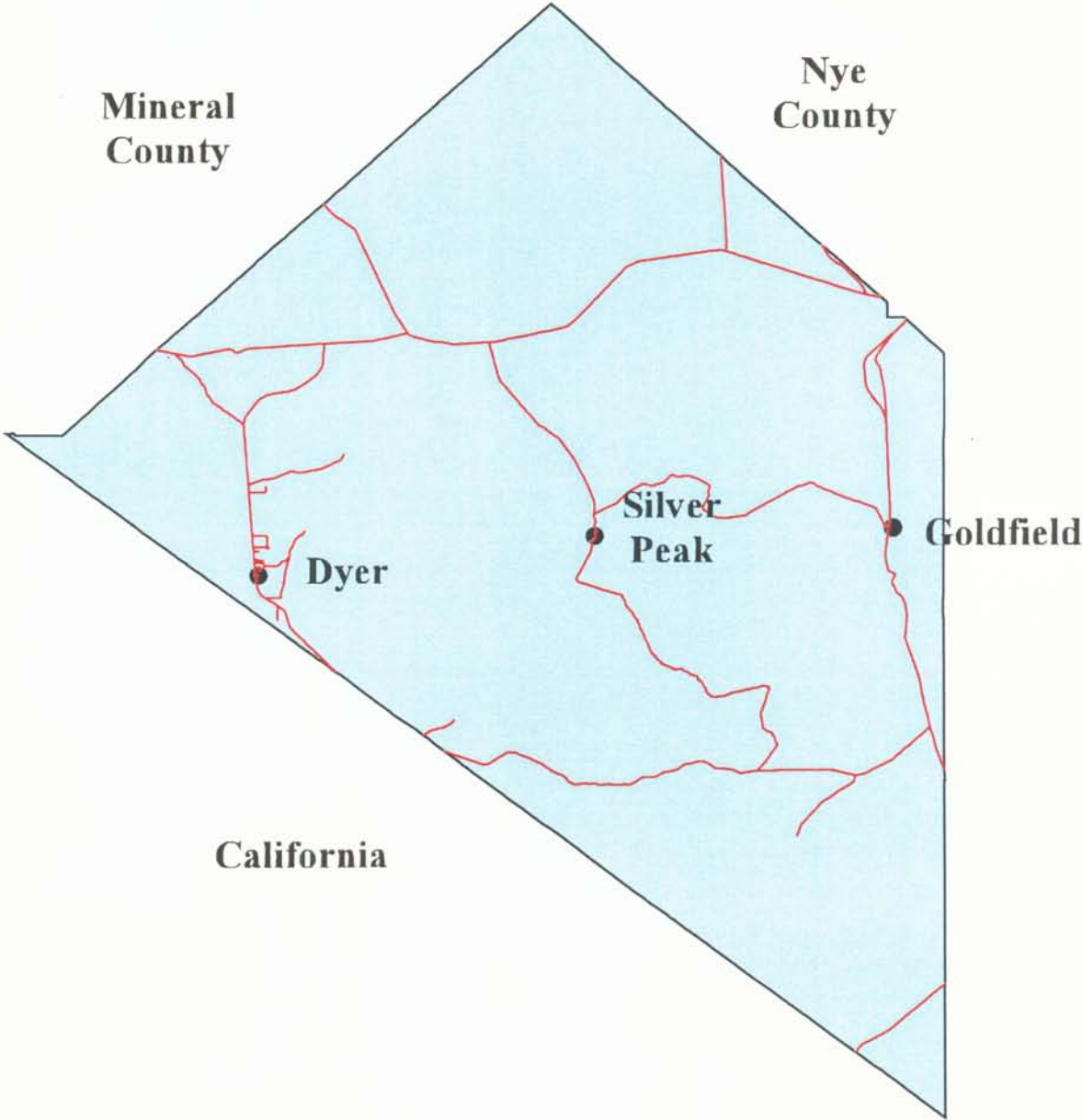
In sum, there are no compelling fiscal barriers to consolidation of these two school districts. Some economies of scale would accrue. Improvement in educational effectiveness seem likely, but are not guaranteed. The largest foreseeable impediment to such a merger is the potential difference in government responsiveness and community cohesion. Perhaps the most effective way to determine if these differences are significant would be to allow the affected citizens to vote on the issue of the merger.

<sup>96</sup> The Nevada Plan school finance provisions require a recalculation of the Basic Support Guarantee for every district in the state any time a single district's support guarantee is altered. The figures in this chart are derived from calculations made by the Nevada Department of Education, Administrative Services unit, dated June 10, 1996.

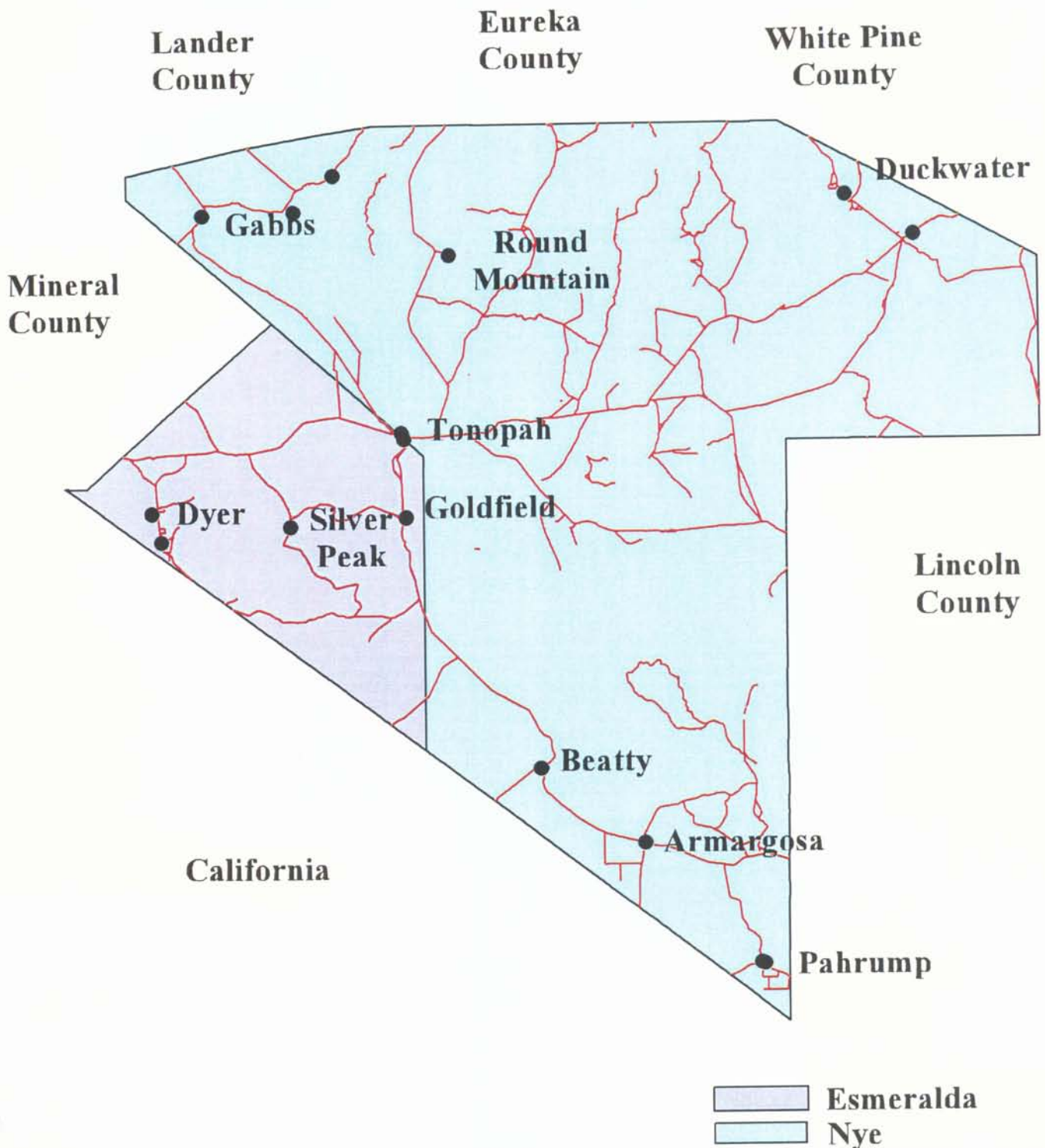
<sup>97</sup> Basic Support includes those dollars guaranteed by the Nevada Plan formula by a combination of state and local sources.

<sup>98</sup> Revenues which fall outside the basic amount guaranteed under the Nevada Plan. The principal source of these funds is a \$0.50 ad valorem property tax levied on each \$100 of assessed valuation. Receipts from the motor vehicle privilege tax, some federal revenues and miscellaneous local revenues make up the balance.

# Esmeralda County - Schools and Major Highways



# Esmeralda and Nye Counties - Schools and Major Highways





## EUREKA COUNTY SCHOOL DISTRICT

### District Statistical Profile

#### County Population<sup>99</sup>

1996 1,720

2000 1,730

#### School District Enrollment

1996 308

2000 392<sup>100</sup>

#### Ethnicity of Students<sup>101</sup>

	<u>1994</u>	<u>1983</u>
White	88.8%	88.8%
Black	1.3%	0.6%
Hispanic	5.0%	2.2%
Asian/P.I.	1.3%	1.1%
American Indian	4.4%	7.3%

#### Schools

High 1

Elementary 2

#### Licensed Employees (full time equivalent)

37.5

#### Student Achievement<sup>102</sup> (Grade 4 percentile scores)

	Reading	Math	Language
State Average	51	53	57
Eureka	74	68	70

#### Student Achievement (Secondary)

	Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M
State Average	58	56	21.2	429	484
Eureka	59	51	19.0	429	377

<sup>99</sup>Nevada Demographer's Office, Bureau of Business and Economic Research, "Nevada Population Estimates (1993) and Forecasts 1994-2000, December 3, 1993.

<sup>100</sup> The school district anticipates growth of approximately 84 students (over an unspecified period) based on an environmental impact statement related to a planned Homestake Mining Ruby Hill Project. Letter from district Superintendent Neil Stevens, June 25, 1996.

<sup>101</sup> Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>102</sup> Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.

<b>Drop-Out Rate</b>	
State Average	9.6%
Eureka	4.9%
<b>Sources of funding<sup>103</sup></b>	
Local	98.6%
State	.002%
Federal	1.4%
<b>Wealth and Debt<sup>104</sup></b>	
Assessed Valuation per student	\$3,320,387
Net Proceeds of mines per student	\$1,836,516
Total Outstanding Debt	0
Debt per student	0
Unused Debt Capacity	\$153,401,905
<b>Tax rates<sup>105</sup></b>	
Debt and/or pay-as-you-go	0.0000
Combined school taxes	0.7500
Highest rate in county	1.7962

Eureka County covers 4,182 square miles and is comprised of just three small towns. County-wide, less than 20 percent of the land is privately owned. The balance is held by federal, state, and county governments, with the federal government by far the largest owner.

Eureka, with a population of about 900, is the county seat and is located in the southern part of the county on Highway 50, 115 miles from Reno and 77 miles from Ely. Most residents shop and obtain professional services (doctors, dentist, accountants) in Elko, approximately 115 miles north. Beowawe (population 200) and Crescent Valley (population 200) are located in the northern portion of the county.

In 1878, with the economy fueled by silver and lead mines, the population of Eureka was approximately 9000. By 1890 the mines had closed and all but 1,600 residents had moved away.<sup>106</sup> This "boom and bust" of the mines has characterized the history of Eureka and continues to dominate the scene today. The mining industry is still the largest employer in the county, followed by construction, which is closely related; agriculture and

<sup>103</sup> McMullen MCPhee & Co., Eureka County School District Financial Report, June 30, 1995.

<sup>104</sup> Thunder, D., Nevada Department of Education, Preliminary report based on district survey, April 16, 1996.

<sup>105</sup> Ibid.

<sup>106</sup> Eureka County, "Overall Economic Development Plan," 1995 Revision.

government are a distant third and fourth. Agriculture accounts for 90 percent of the land use, but only a small fraction of the jobs.

Visitors to Eureka County are struck by the vast distances and isolation. Some students meet the bus at 6:00 a.m. for a two-hour ride to school. It is not unusual for students to travel five hours by bus to participate in sports or other school activities.

The school district operates an elementary school for 54 students in Beowawe. This structure will be replaced when a new school is constructed in Crescent Valley. High school students from this area attend school in Battle Mountain. The remaining students attend elementary and secondary school in Eureka. Approximately 17 students commute from the Indian Reservation and community around Duckwater in Nye County to attend high school in Eureka.

In the 1980s Eureka County School District was one of the poorest in the state. Today, due to revenues from mining, it is the most prosperous. In fact, because of its wealth, under the provisions of the Nevada Plan, it receives very little aid from the state. Unlike many of its neighbors, it has just constructed a new elementary school, will begin construction of a second elementary school, and is planning major renovations of the high school. The District has developed, and is implementing, extensive technology plans. Students enjoy small class sizes, have ready access to computers, and travel to distant school activities in air-conditioned tour buses<sup>107</sup>. School district employees receive the highest salaries in the state.<sup>108</sup> School taxes are the lowest permissible under the law, and overall county taxes are the lowest in the state.

Two large mining operations north of Interstate 80 account for the vast majority of mining activity in the county and the relative prosperity of the schools. Combined, they hire nearly 6,000 employees and contractors. Only 300 of these employees live in Eureka County, however.<sup>109</sup> Nearly all of the rest commute from Elko County. Thus, Elko County School District shoulders the burden of providing education for the children of these mine workers, while Eureka County reaps virtually all of the benefits from the revenues the mines generate.

An attempt to create a General Improvement District (GID) to share revenues to construct schools in Elko County was defeated in 1991. Subsequently, mine

<sup>107</sup> One of the district's three buses is a 25 years old and not air conditioned. When there are three events, one group of student-athletes travels in that bus. Letter from Superintendent Neil Stevens, June 25, 1996.

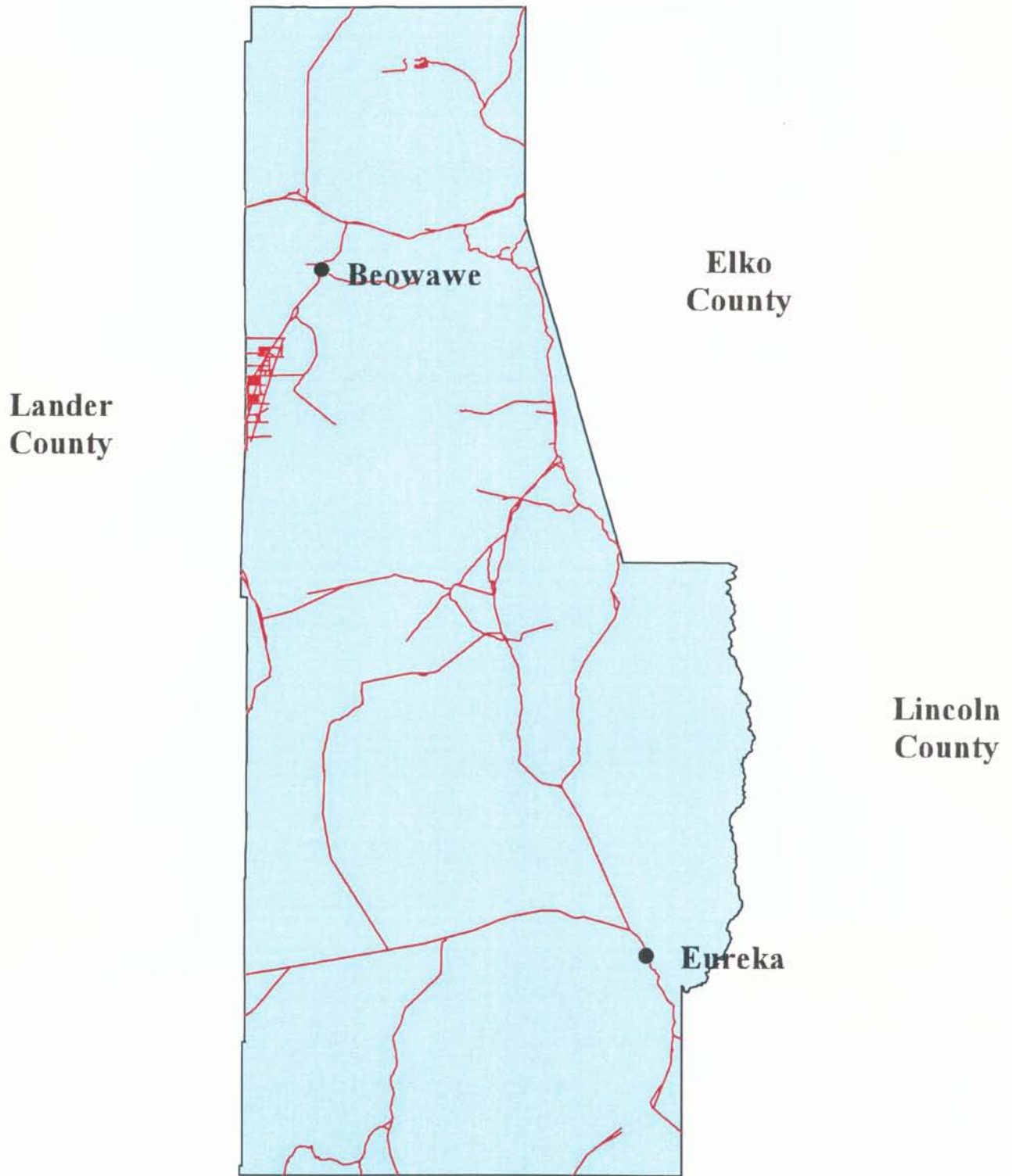
<sup>108</sup> Nevada Board of Education, "Research Bulletin: Student Enrollment and Licensed Personnel Information," February 1996.

<sup>109</sup> Eureka County, Op Cit.

operators have made substantial contributions toward building school facilities in Elko; but that county is still seriously burdened by the need to build more schools to serve the children of mine workers.

Three potential remedies for this apparent inequity have been suggested. The territory containing the mines could be annexed to the Elko School District. Alternatively, the two school districts—Elko and Eureka—could be merged into a single entity. (See the section on Elko for a more complete discussion of the ramifications of this proposal.) The third option is to reconsider the GID. Removing mines from Eureka's tax base would essentially impoverish the County, leaving it with inadequate revenues to complete planned capital improvements. From a fiscal perspective, the second approach would seem to be more feasible and fair. Implementation problems could be significant, however, and the combined districts would offer serious logistical problems because of the huge travel distances involved.

# Eureka County - Schools and Major Highways



## HUMBOLDT COUNTY SCHOOL DISTRICT

### District Statistical Profile

#### County Population<sup>110</sup>

1996 15,490

2000 15,630

#### School District Enrollment<sup>111</sup>

1996 3,845

2000 3,880

#### Ethnicity of Students<sup>112</sup>

	<u>1994</u>	<u>1983</u>
White	74.5%	76.9%
Black	0.3%	0.4%
Hispanic	20.6%	13.5%
Asian/P.I.	0.4%	0.1%
American Indian	4.0%	9.1%

#### Schools

High	2
Middle	2
Elementary	10
Juvenile detention facility	1

Licensed Employees (full time equivalent) 261.1

#### Student Achievement<sup>113</sup>(Grade 4 percentile scores)

	Reading	Math	Language
State Average	51	53	57
Humboldt	51	51	55

#### Student Achievement (Secondary)

	Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M
State Average	58	56	21.2	429	484
Humboldt	56	44	19.8	428	429

<sup>110</sup> Nevada Demographer's Office, Bureau of Business and Economic Research, "Nevada Population Estimates (1993) and Forecasts 1994-2000, December 3, 1993.

<sup>111</sup> This is a very rough estimate predicated on assumptions that the portion of the total population being school age will remain constant through the end of the decade and that the Demographer's forecast is accurate.

<sup>112</sup> Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>113</sup> Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.

<b>Drop-Out Rate</b>		
State Average	9.6%	
Humboldt	6.2%	
<b>Sources of funding<sup>114</sup></b>		
Local	57.1%	
State	38.4%	
Federal	4.5%	
<b>Wealth and debt<sup>115</sup></b>		
Assessed Valuation per student		\$122,078
Net Proceeds of mines per student		\$13,354
Total Outstanding Debt		\$10,830,000
Debt per student		\$2,817
Unused Debt Capacity		\$59,578,681
<b>Tax rates<sup>116</sup></b>		
Debt and/or pay-as-you-go	.54	
Combined school taxes	1.29	
Highest rate in county	3.4093	

Winnemucca, the county seat and largest population center of Humboldt County, is located on Interstate 80, approximately 150 miles east of Reno. Modest but fairly steady growth and older buildings have created demand for new facilities. A new middle school opened this year and an addition to Lowrey High School is under construction. Some prior construction was financed with bonds; more recently, the District has relied on "pay-as-you-go" to finance construction. As in other northern counties where growth is primarily attributable to mining, fear of a disappearing tax base tends to motivate the citizens of Humboldt to avoid long-term debt. Currently, the \$1.29 tax rate places Humboldt at about the median of school taxes statewide; however, total county taxes are among the highest in the state.

Most of the District's students attend school in Winnemucca. The District also operates schools in several small remote communities, such as McDermitt (127 students, K—12) and Denio (13 students, K—6) on the Oregon border, and Orvada (46 students, K—8) 45 miles north of Winnemucca.

Approximately 184 students living in the Grass Valley area of Pershing County attend school in Winnemucca. This community is located no more than 20 miles from Winnemucca, but about 90 miles from Lovelock, the site

<sup>114</sup> Kafoury, Armstrong & Co., Humboldt County Audit, June 30, 1995.

<sup>115</sup> Thunder, D., Nevada Department of Education, Preliminary report based on district survey, April 16, 1996.

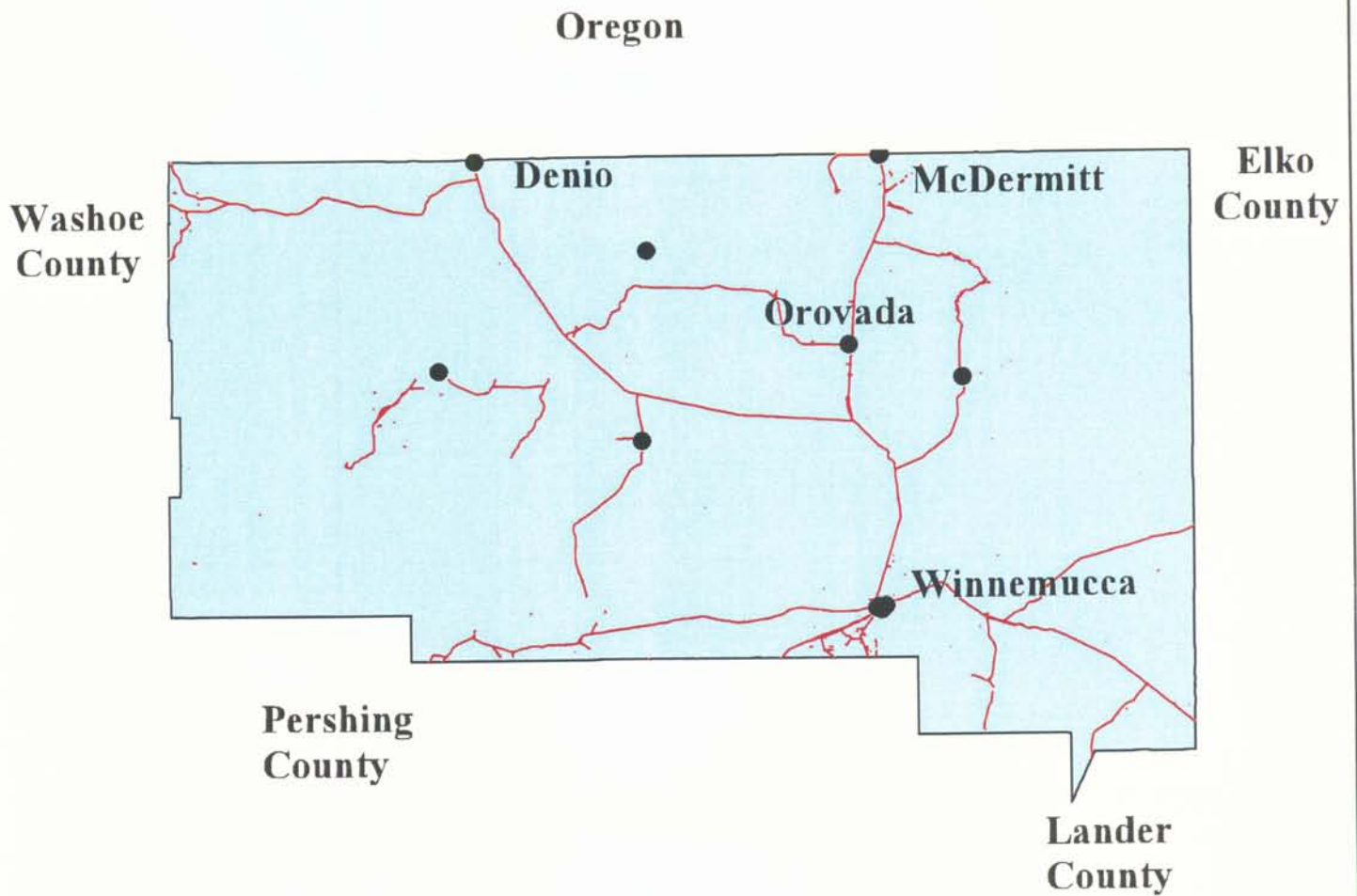
<sup>116</sup> Ibid.

of the schools in Pershing County. No problems with the current arrangement were reported; however, two concerns prompted examination of the feasibility of transferring this territory from the Pershing County School District to the Humboldt County School District. First is the uncertainty faced by parents and students in Grass Valley. Either school district, at any time and for any reason, can terminate the agreement that governs inter-district attendance. Under these circumstances, students in this area would have few alternatives to being bussed 90 miles each way to Lovelock. The second consideration is that parents in Grass Valley are presently unrepresented in the governance of the school district where their children attend school because they reside and vote in another county.

A more complete analysis of this option is included in the section on Pershing County.



# Humboldt County - Schools and Major Highways



## LANDER COUNTY SCHOOL DISTRICT

<u>District Statistical Profile</u>						
County Population <sup>117</sup>						
1996 6,420						
2000 6,230						
School District Enrollment <sup>118</sup>						
1996 1,639						
2000 1,595						
Ethnicity of Students <sup>119</sup>						
		<u>1994</u>		<u>1983</u>		
White		79.6%		85.5%		
Black		0.2%		0.0%		
Hispanic		16.3%		8.4%		
Asian/P.I.		0.2%		0.5%		
American Indian		3.7%		5.5%		
Schools						
High	2					
Middle	1					
Elementary	3					
Licensed Employees (full time equivalent)				109.5		
Student Achievement <sup>120</sup> (Grade 4 percentile scores)						
		Reading	Math	Language		
State Average		51	53	57		
Lander		56	59	66		
Student Achievement (Secondary)						
		Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M
State Average		58	56	21.2	429	484
Lander		57	63	19.3	—	—

<sup>117</sup> Nevada Demographer's Office, Bureau of Business and Economic Research, "Nevada Population Estimates (1993) and Forecasts 1994—2000", December 3, 1993.

<sup>118</sup> This is a very rough estimate predicated on assumptions that the portion of the total population being school age will remain constant through the end of the decade and that the Demographer's forecast is accurate.

<sup>119</sup> Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>120</sup> Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.

Drop-Out Rate		
State Average		9.6%
Lander		11.1%
Sources of funding <sup>121</sup>		
Local		41.9%
State		53.2%
Federal		4.9%
Wealth and debt <sup>122</sup>		
Assessed Valuation per student		\$141,635
Net Proceeds of mines per student		\$49,120
Total Outstanding Debt		\$2,081,000
Debt per student		\$1,270
Unused Debt Capacity		\$34,215,176
Tax rates <sup>123</sup>		
Debt and/or pay-as-you-go	0.1063	
Combined School taxes	0.8563	
Highest rate in county	3.2422	

Battle Mountain, the county seat and primary population center of Lander County, is located on Interstate 80, approximately 220 miles east of Reno. The next larger city is Elko, approximately 63 miles west. The only other concentration of population is Austin, 89 miles south of Battle Mountain. The county population has grown at a rate of about 4 percent for each of the last several years. Virtually all of that growth has been in Battle Mountain. The population is forecast to remain constant or decline slightly for the balance of the decade. Mining is the primary source of employment; thus, the closing or opening of mines is the primary determinant of population changes in the county. The Lander superintendent additionally reported that recent studies revealing abundant underground water and unprecedented sales of land by Santa Fe Railroad may encourage development that could attract population.

Four schools in Battle Mountain enroll all but 92 of the District's students. The District operates one elementary school (49 students) and one high school (43 students) in Austin. The population in Austin continues on a long-term trend of decline.

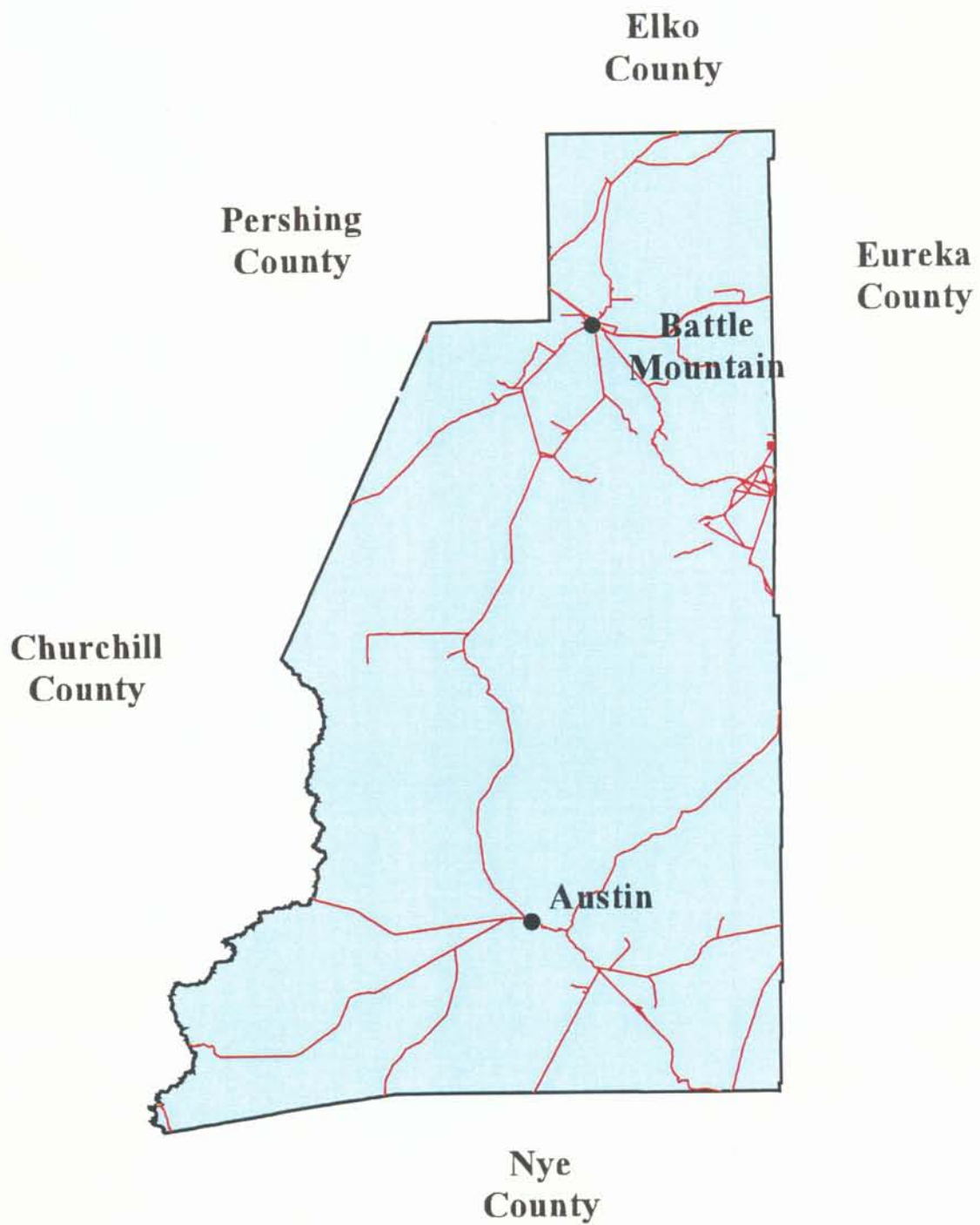
<sup>121</sup> Kafoury, Armstrong & Co., Lander County School District Audit, June 30, 1995.

<sup>122</sup> Thunder, D., Nevada Department of Education, Preliminary report based on district survey, April 16, 1996.

<sup>123</sup> Ibid.

Like many of its neighbors, Lander County is finding it difficult to provide adequate facilities for its students. Austin Elementary School is at the end of its useful life. According to the Superintendent, it does not even meet code or earthquake standards. Because of its age and condition, this school is costly to maintain. The district had more than \$3 million in the bank from a pay-as-you-go tax levied in 1989 to build a new elementary school in Battle Mountain. This project is stalled until the city builds a new water system. Overcrowding in Battle Mountain may, in the future, necessitate double sessions or year-round schedules. The Superintendent did not expect voters to approve increased taxes for a bond issue or a new pay-as-you-go fund, even though school taxes are among the lowest in the state.

# Lander County - Schools and Major Highways



## LINCOLN COUNTY SCHOOL DISTRICT

<u>District Statistical Profile</u>						
County Population <sup>124</sup>						
	1996 4,190					
	2000 4,210					
School District Enrollment <sup>125</sup>						
	1996 1,109					
	2000 1,114					
Ethnicity of Students <sup>126</sup>						
		<u>1994</u>		<u>1983</u>		
	White	90.0%		91.9%		
	Black	3.1%		5.1%		
	Hispanic	4.8%		1.9%		
	Asian/P.I.	0.5%		0.7%		
	American Indian	1.6%		1.3%		
Schools						
	High	2				
	Middle	2				
	Elementary	4				
	Youth Center	1				
Licensed Employees (full time equivalent)				90		
Student Achievement <sup>127</sup> (Grade 4 percentile scores)						
		Reading	Math	Language		
	State Average	51	53	57		
	Lincoln	64	71	61		
Student Achievement (Secondary)						
		Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M
	State Average	58	56	21.2	429	484
	Lincoln	78	61	21.0	—	—

<sup>124</sup> Nevada Demographer's Office, Bureau of Business and Economic Research, "Nevada Population Estimates (1993) and Forecasts 1994—2000", December 3, 1993.

<sup>125</sup> This is a very rough estimate predicated on the assumptions that the State Demographer's forecast is accurate and that the percent of total population that is school age will remain constant.

<sup>126</sup> Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>127</sup> Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.

Drop-Out Rate		
State Average		9.6%
Lincoln		0.7%
Sources of funding		
Local		18.6%
State		76.7%
Federal		4.7%
Wealth and debt <sup>128</sup>		
Assessed Valuation per student		\$70,398
Net Proceeds of mines per student		\$169
Total Outstanding Debt		\$2,205,000
Debt per student		\$199
Unused Debt Capacity		\$9,905,836
Tax rates <sup>129</sup>		
Debt and/or pay-as-you-go	0.2231	
Total school taxes	0.9731	
Highest rate in county	3.3180	

Lincoln County is comprised of small, remote communities surrounded mostly by land owned by the federal government. Panaca, the county seat, is approximately 165 miles northeast of Las Vegas. Cedar City and St. George, Utah are about half that distance. As a consequence, residents of Lincoln County tend to identify more with those communities than with other communities in Nevada.

Only about two percent of the county's 10,000 square miles are privately owned and there is very little mining activity. The resultant tax base makes Lincoln one of the poorest counties in Nevada (in terms of assessed valuation). It does, however, serve as a good example of the equalizing properties of the Nevada Plan. The state provides nearly 77 percent of the District's operating revenues to ensure that the resources available for educating Lincoln County's children are comparable to those in wealthier districts. The county's low tax base also serves to highlight the inequity of the school construction program. Whereas their neighbors in Eureka are able to build schools on a pay-as-you-go basis with an overall county tax burden of 1.8438, Lincoln struggles to provide adequate school facilities and other county services by taxing its citizens at a rate of 3.3180.<sup>130</sup> In fact, the District

<sup>128</sup> Thunder, D. Nevada Department of Education, Preliminary report of district survey, April 16, 1996.

<sup>129</sup> Ibid.

<sup>130</sup> Ibid.

was forced to seek special funding from the Legislature to complete construction of a school when the actual costs exceeded estimates and exhausted the capacity of the District to raise additional funds.

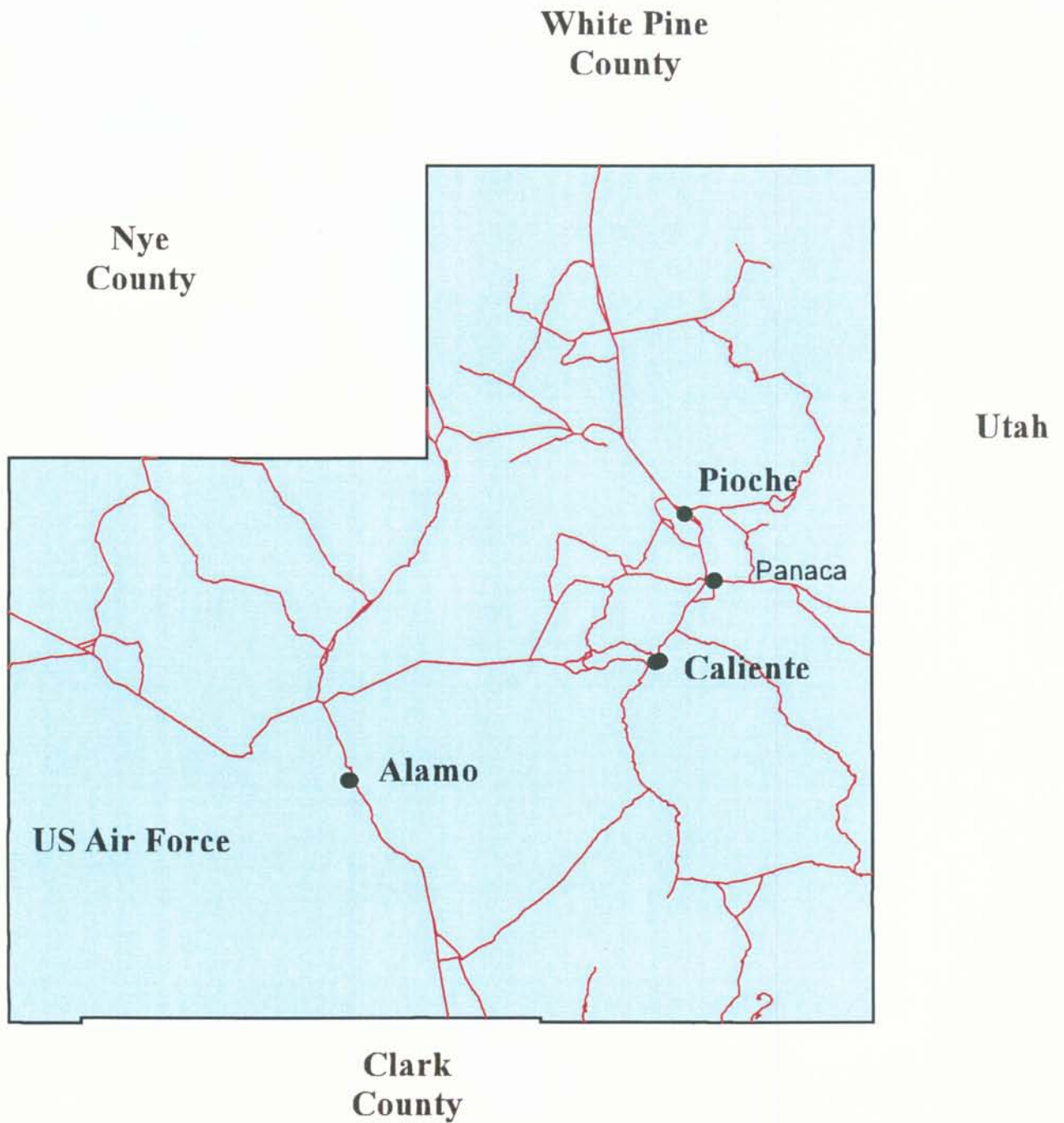
The school buildings MAP visited in Panaca were in reasonable condition, but probably nearing the end of their useful lives. The county population of is projected to remain unchanged for the next five years. Thus, while it is unlikely that new schools will be needed to accommodate enrollment growth, normal deterioration will eventually necessitate construction of new schools. When this occurs, it may be beyond the capacity of the District to respond.

Lincoln, like most rural districts, reports difficulty in recruiting and training teachers. Once teachers are hired, they and the District face significant problems gaining access to inservice training and advanced courses. Teachers seeking advanced training or degrees must incur the expense and inconvenience of relocating for one or more summers to take courses on a college campus. Lincoln encounters similar difficulty providing specialized courses and services to students. Advanced academic and vocational courses are seldom offered. Similarly, specialized resources such as psychologists, speech therapists, and curriculum experts tend to be available only ad hoc, through contracting with individuals from one of the urban counties.

Lincoln students and educators have little access to instructional technology. As elsewhere in rural Nevada, access to the Internet is an expensive long distance call. As discussed elsewhere in this report (see Appendix C), Lincoln and its rural neighbors would profit from a statewide technology program.



# Lincoln County - Schools and Major Highways



## LYON COUNTY SCHOOL DISTRICT

<u>District Statistical Profile</u>						
County Population <sup>131</sup>						
1996 27,930						
2000 32,380						
School District Enrollment <sup>132</sup>						
1996 5,426						
2000 6,290						
Ethnicity of Students <sup>133</sup>						
	<u>1994</u>		<u>1983</u>			
White	84.3%		88.1%			
Black	0.5%		0.3%			
Hispanic	9.3%		4.9%			
Asian/P.I.	1.2%		0.9%			
American Indian	4.6%		5.9%			
Schools						
High	4					
Middle	4					
Elementary	6					
Licensed Employees (full time equivalent)				368		
Student Achievement <sup>134</sup> (Grade 4 percentile scores)						
	Reading	Math	Language			
State Average	51	53	57			
Lyon	47	48	52			
Student Achievement (Secondary)						
	Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M	
State Average	58	56	21.2	429	484	
Lyon	61	45	20.0	452	458	
Drop-Out Rate						
State Average	9.6%					
Lyon	8.3%					

<sup>131</sup> Nevada Demographer's Office, Bureau of Business and Economic Research, "Nevada Population Estimates (1993) and Forecasts 1994-2000", December 3, 1993.

<sup>132</sup> This is a rough estimate based on the assumption that the State Demographer's projections are accurate and that the percentage of the population that is school age remains unchanged.

<sup>133</sup> Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>134</sup> Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.

Sources of funding <sup>135</sup>	
Local	24.0%
State	70.1%
Federal	5.9%
Wealth and Debt <sup>136</sup>	
Assessed Valuation per student	\$78,416
Net Proceeds of mines per student	\$165
Total Outstanding Debt	\$38,845,000
Debt per student	\$7,159
Unused Debt Capacity	\$24,901,167
Tax rates <sup>137</sup>	
Debt and/or pay-as-you-go	0.7900
Combined school taxes	1.5400
Highest rate in county	3.1640

Lyon County encompasses nearly 2,000 square miles in west central Nevada. It is one of the faster growing areas in the state, with a total population projected to exceed 32,000 by the end of the decade. Most of the County's population resides in, or near, Dayton, Fernley, and Yerington. The economy of Yerington, which is the county seat, is predominantly agricultural. The fastest growing areas are Dayton, a suburb of Carson City, and Fernley, a suburb of Reno. Local economies feature light industry as well as agriculture.

The county tax base is relatively small, in part because approximately 40 percent of the housing stock is mobile homes. However, the District has had success passing bond issues to build schools, and the facilities MAP visited seemed adequate and in good repair. Construction of the Silver Stage Middle School was completed and the school opened in 1994—95. In 1994, voters approved another \$16,000,000 bond issue for various facilities improvements and a new elementary school in Dayton.

The school district operates 14 schools for more than 5,000 students in five communities. Fernley is located near the northern border and is approximately equidistant between Reno and Fallon. There are approximately 1,600 students in the Fernley schools, including a high school of 568. About 650 students attend two schools in Silver Springs, located 14 miles south of Fernley and 36 miles east of Dayton. Approximately 1,500 students attend school in Dayton, which is located eight miles south of

<sup>135</sup> Lyon County School District, "Comprehensive Annual Financial Report", June 30, 1995.

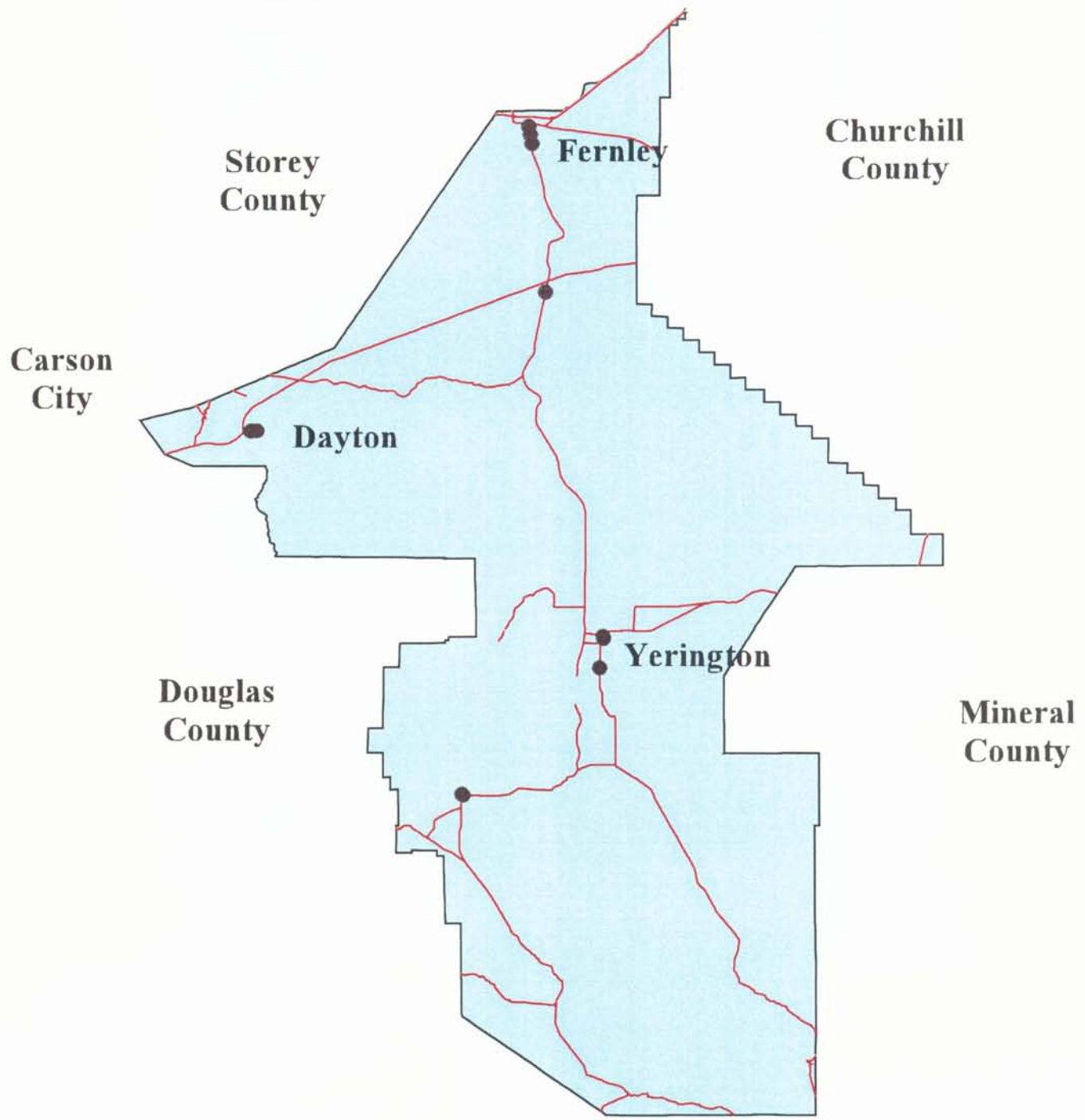
<sup>136</sup> Thunder, D., Nevada Department of Education, Preliminary report of survey of school districts, April 16, 1996.

<sup>137</sup> Ibid.

Virginia City and 15 miles east of Carson City. Dayton High enrolls 400 students. Approximately 1,400 students attend school in Yerington, including 400 at Yerington High. The remaining 300 students attend the elementary school and high school in Smith Valley.

The community of Mark Twain straddles the Lyon-Storey border. Students from that area who reside in Storey County commute approximately 50 minutes by bus each way to school in Virginia City. Students who reside in Lyon County attend school in nearby Dayton. Please see the Storey County analysis of the implications of annexing all of Mark Twain to the Lyon County School District.

# Lyon County - Schools and Major Highways



## MINERAL COUNTY SCHOOL DISTRICT

<u>District Statistical Profile</u>						
County Population <sup>138</sup>						
1996 6,370						
2000 6,180						
School District Enrollment <sup>139</sup>						
1996 1,160						
2000 1,125						
Ethnicity of Students <sup>140</sup>						
	<u>1994</u>		<u>1983</u>			
White	68.7%		73.7%			
Black	5.9%		6.6%			
Hispanic	8.7%		6.5%			
Asian/P.I.	2.6%		0.7%			
American Indian	14.1%		12.6%			
Schools						
High	1					
Elementary	3					
Licensed Employees (full time equivalent)			77.5			
Student Achievement <sup>141</sup> (Grade 4 percentile scores)						
	Reading	Math	Language			
State Average	51	53	57			
Mineral	47	44	59			
Student Achievement (Secondary)						
	Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M	
State Average	58	56	21.2	429	484	
Mineral	61	59	17.9	342	372	
Drop-Out Rate						
State Average	9.6%					
Mineral	4.2%					

<sup>138</sup> Nevada State Demographer, "Nevada Population Information," June 1994.

<sup>139</sup> This is a rough estimate that assumes that the overall population forecast is accurate and that the proportion of the population that is school age will remain the same.

<sup>140</sup> Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>141</sup> Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.

Sources of funding <sup>142</sup>	
Local	27.8%
State	58.9%
Federal	13.3%
Wealth and debt <sup>143</sup>	
Assessed Valuation per student	\$151,472
Net proceeds of mines per student	\$23,583
Total Outstanding Debt	0
Debt per student	0
Unused Debt Capacity	\$26,356,074
Tax rates <sup>144</sup>	
Debt and/or pay-as-you-go	0.0000
Combined school taxes	0.7500
Highest rate in county	2.9255

Mineral County is not quite as rural or remote as its neighbors to the south and east. Hawthorne, population 5,390, and the county seat, is 70 miles from Fallon and 130 miles from Reno. Until 15 years ago, Hawthorne enjoyed the prosperity associated with a large payroll and significant numbers of professional employees at the U.S. Government Ammunition Plant. That facility is now operated, at a much reduced level, by civilian contractors who hire primarily lower-paid, limited-term employees. As a consequence, Mineral County is faced with adapting to a steady decline in population, a shift from relatively high-paid jobs to lower-paying, mostly service-sector jobs, and from a stable population to one with a significant segment of relatively young, transient, low to moderate income earners.

Mineral County faces many of the same problems, mostly financial, found in other rural counties. The most immediate problem, reported at the time of MAP's visit, is caused by the contractors at the ammunition plant withholding payment of possessory use taxes, leaving the school district several thousand dollars short on its 1995—96 budget. Of a more systemic nature, the District's school buildings tend to be obsolete and nearing the end of their useful lives. One elementary school is frequently choked by dust blowing unimpeded across an abandoned military base. The prospects for passing a bond issue seem bleak. The combinations of high transiency, relatively low paying jobs, and a large population of older citizens tends to dampen the likelihood of a successful revenue raising election.

<sup>142</sup> Bernard, Vogler & Co., Mineral County School district Financial Report, June 30, 1995.

<sup>143</sup> Thunder, D., Nevada Department of Education, Preliminary report based on survey of school districts, April 16, 1996.

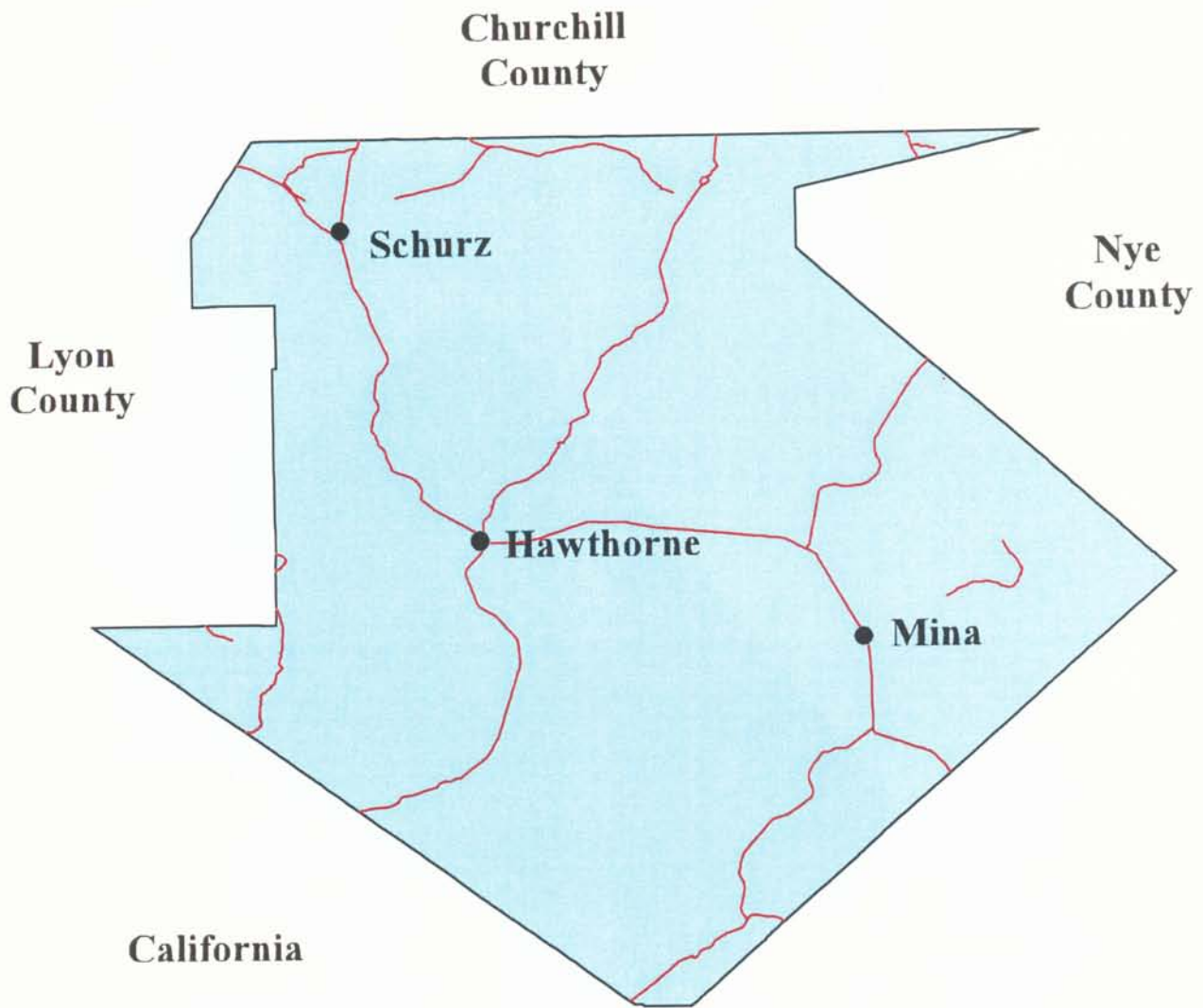
<sup>144</sup> Ibid.

It should be noted that the District is debt-free, the tax rate is the lowest permissible under state law, and the county total tax burden is among the lowest in the state. Even in light of demonstratable need and adequate taxing capacity, the citizens of Mineral County appear unwilling to provide their children with adequate school facilities.

A unique problem exists for the elementary school on the reservation in Schurz. Portions of the building (though not the portions that house classes or other school activities) have been condemned. It was reported to MAP that the normal impediments to passing a bond issue for this school are exacerbated by the fact that citizens are reluctant to raise their tax burden to educate students on the reservation since the families living there are exempt from paying property taxes. Tribal leaders have raised \$750,000 and the Legislature has appropriated \$250,000 of special funding for this school. Even so, the area is far short of having sufficient funds to build the new school that is presently contemplated.



# Mineral County - Schools and Major Highways



## NYE COUNTY SCHOOL DISTRICT

<u>District Statistical Profile</u>					
County Population <sup>145</sup>					
1996	23,460				
2000	25,380				
School District Enrolment <sup>146</sup>					
1996	4,528				
2000	7,071				
Ethnicity of Students <sup>147</sup>					
	<u>1994</u>	<u>1983</u>			
White	83.7%	89.7%			
Black	1.0%	0.9%			
Hispanic	9.6%	6.5%			
Asian/P.I.	2.0%	0.6%			
American Indian	3.6%	2.3%			
Schools					
High	5				
Middle	1				
Elementary	10				
Licensed (full time equivalent)	158.5				
Student Achievement <sup>148</sup> (Grade 4 percentile scores)					
	Reading	Math	Language		
State Average	51	53	57		
Nye	50	48	48		
Student Achievement (Secondary)					
	Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M
State Average	58	56	21.2	429	484
Nye	52	43	21.4	442	460
Drop-Out Rate					
State Average	9.6%				
Nye	3.4%				

<sup>145</sup>Nevada Demographer's Office, Bureau of Business and Economic Research, "Nevada Population Estimates (1993) and Forecasts 1994—2000", December 3, 1993.

<sup>146</sup>Nye County School District, "Enrollment by Location by Year 1984-2000".

<sup>147</sup>Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>148</sup>Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.

Sources of funding<sup>149</sup>

Local	52.6%
State	44.8%
Federal	2.6%

Wealth and debt<sup>150</sup>

Assessed Valuation per student	\$125,129
Net proceeds of mines per student	\$18,423
Total Outstanding Debt	\$28,920,000
Debt per student	\$6,387
Unused Debt Capacity	\$56,067,366

Tax rates<sup>151</sup>

Debt and/or pay-as-you-go	0.5850
Combined school taxes	1.3550
Highest rate in county	3.6400

Nye County is composed of more than 18,000 square miles, making it the third largest county, in land mass, in the United States. The population of just over 23,000 is concentrated in a few, relatively isolated communities. Modest population growth is forecast for the rest of this decade, with virtually all of it occurring in the southern half of the county.

Approximately 93 percent of the county is owned by the federal government, top secret military bases and vast holdings of the Bureau of Land Management. Aside from the federal government, the largest landowners are mining companies and utilities. About half of all jobs in the county are in the service sector. Government and mining make up another 30 percent.<sup>152</sup>

In the northern part of the county, Tonopah is the county seat and the largest town. The school district office is in Tonopah. Two elementary schools and one high school enroll a total of 667 students in Tonopah. Fifty-five secondary students are bussed from nearby Esmeralda County. Tonopah is relatively isolated and rural. It enjoys a stable population and anticipates no appreciable growth for the balance of the decade.<sup>153</sup>

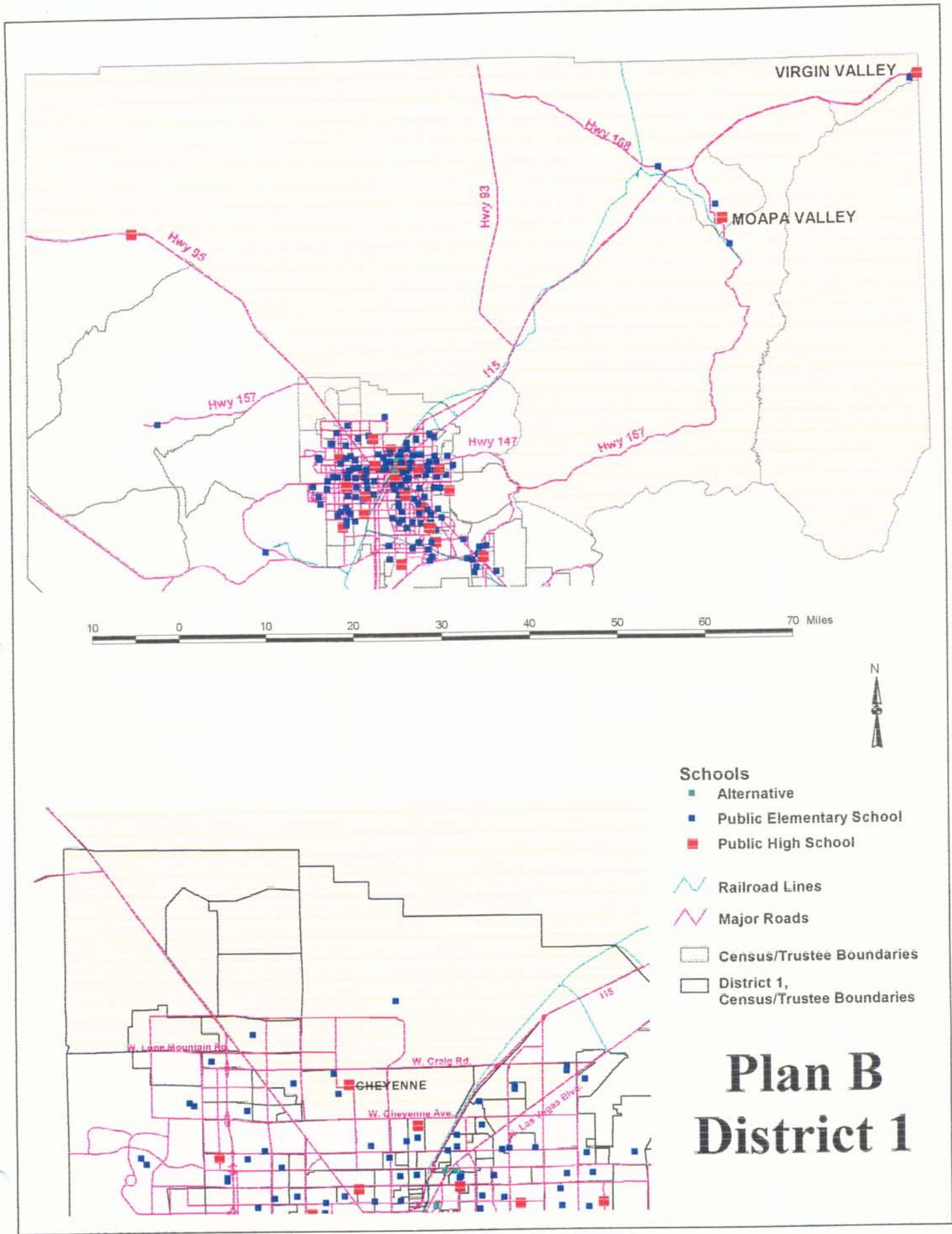
<sup>149</sup> Daniel C. McArthur, LTD, Nye County Financial Report, June 30, 1995.

<sup>150</sup> Thunder, D., Nevada Department of Education, Preliminary report based on survey of school districts, April 16, 1996.

<sup>151</sup> Ibid.

<sup>152</sup> Hutchison, Shockley, Erley & Co., "Official Statement," November 1, 1995.

<sup>153</sup> Enrollment in the northern portion of the county is predicted to decline from the current 1,172 to 1,149 by 2005. See Architectural Research Consultants, "Nye County School District Facilities Master Plan," February 14, 1996.



- Schools**
- Alternative
  - Public Elementary School
  - Public High School
- Railroad Lines
- Major Roads
- Census/Trustee Boundaries
- District 1, Census/Trustee Boundaries

# Plan B District 1

Approximately 110 miles to the northwest and 60 miles to the north are the communities of Gabbs and Round Mountain. Both are isolated rural communities, in many ways similar to Tonopah. Just over 100 elementary and secondary school students attend school in Gabbs and approximately 450 students attend the elementary and high school in Round Mountain.

Another identifiable community of interest is Duckwater. Duckwater is an extremely isolated community located near an Indian reservation at the northeast corner of the county. The elementary school in Duckwater is approximately 120 miles from the school district office in Tonopah. The secondary students from Duckwater attend school in Eureka, which is only 50 miles away, through an interdistrict agreement entered into with Eureka. Even though only approximately 40 students (including secondary students from the Bureau of Indian Affairs school on a nearby reservation) are affected, and Duckwater is a significant distance from any high school, a case for including Duckwater as a part of the Eureka County School District can be made.

A second situation in Nye County where distance and demographics may prompt the consideration of a boundary change is the growing population in the southern part of the county in and around Pahrump. This part of the school district is separated from Tonopah by public land and approximately 170 miles of highway. Only a narrow, largely uninhabited, corridor of private land connects the two portions of the district.

Pahrump is located near the Nevada-California border, about 350 miles northwest of Los Angeles and about one hour from Las Vegas. In 1990 there were 3,509 housing units in Pahrump. By the second quarter of 1995, there were 6,467, an increase of 84 percent in just five years.<sup>154</sup> Currently, approximately 2,600 of the district's 4,500 students reside in Pahrump. The district has forecast that there will be 7,395 students in Pahrump by 2005.<sup>155</sup>

The rapidly growing population in this area tends to be comprised of workers from Las Vegas and retirees attracted by low housing costs, low taxes, and mild winters. As one would anticipate, there appear to be significant social, political, and economic differences between the citizens in the south and those in the rural north who often have strong family ties to the community. Separating the county into northern and southern school districts seems to enjoy some level of public support in both parts of the county.

Amargosa Valley lies 43 highway miles northwest of Pahrump. The students from Amargosa Valley Elementary School (current enrollment 168) attend high school in Beatty, which is another 29 miles northwest. Beatty

<sup>154</sup> Hutchison, et al, Op cit.

<sup>155</sup> Architectural Research Consultants, Op cit.

Elementary school enrollment is currently 224 and the high school enrollment is 176. Enrollment in this area is predicted to increase to just over 900 by 2005. These communities appear to be demographically more similar to Tonopah than to Pahrump. On the other hand, they are geographically closer to Pahrump.

Should the current district be split into northern and southern districts, it is important to consider the identified capital improvement needs for each area. The district has recently identified capital needs for the next two to three years of at least \$54,085,130. Approximately \$20 million would be allocated to schools in Pahrump and another \$11 million to schools in Beatty and Amargosa.<sup>156</sup> The balance of needs are in the northern part of Nye.

Tonopah lies on the Esmeralda County line and is only 25 miles from Goldfield, the county seat of Esmeralda. One of the ironies of the current school district boundary configuration is that two of the three schools in Esmeralda County are closer to Tonopah than are any of the schools elsewhere in Nye County. The third school is 11 miles further away than Gabbs, the Nye County school closest to Tonopah. Since 1926, secondary school students residing in Esmeralda County have attended high school in Tonopah.

### *Application of Criteria*

Nye County presents a number of challenging boundary issues. The first to be analyzed is the transfer of territory in and around Duckwater to the Eureka County School District. Next we analyze dividing the existing district into northern and southern districts, with Pahrump and the area south of Pahrump forming one part of the district and the rest of the county, north of Pahrump' forming the other half. The third major analysis consists of consolidating Esmeralda County School District with the Northern Nye County School District, which is discussed in detail under Esmeralda.

### **Educational Effectiveness**

#### Duckwater

In terms of educational effectiveness, there is probably little to be gained or lost from the reorganization proposal. The most prominent factors affecting the Duckwater students are the extremely small size of their elementary school and the vast distances secondary students have to travel. No organizational scheme will substantially compensate for these two factors.

Moving to the Eureka County School District may enhance the Duckwater Elementary School's access to school district services. Eureka is substantially

<sup>156</sup>Ibid.

closer and enjoys access to far greater financial resources. However, it is smaller and less likely to offer even the modest specialized services currently available from Nye. The move could improve articulation of elementary and secondary educational programs for Duckwater students by placing both their elementary and secondary education under the control of a single district administration.

#### Pahrump

Since the characteristics which most impact school effectiveness will not change, it is unclear that school district reorganization will have a major impact on educational effectiveness. Presumably, the breadth of educational program offerings will grow as the student population increases, regardless of where district boundaries are drawn. Under any organizational arrangement, students should not experience any appreciable change in travel time. Parental involvement in school board issues could potentially be greater, but the extent to which parents are involved in *schools* may not be affected.

### **Racial and Ethnic Composition**

Since the school attendance boundaries are not impacted, there would be no change in the racial or ethnic composition of the schools.

### **Organization Scale**

#### Duckwater

Addition or deletion of Duckwater would not materially impact the size of either district.

#### Pahrump

Splitting Nye County into two smaller units will exacerbate the problems already caused by the small population of Nye County. Undoubtedly, savings from decreased travel costs by district staff would be realized. It was not possible to ascertain how much these would be offset by establishing a second district office and governing board; nor was it possible to estimate the amount of duplication of facilities, equipment, and administration currently necessitated by the distance between Pahrump and Tonopah. There would be no additional revenue generated by this division, which could, in the short run, require cuts in other expenditures.

### **Governmental Responsiveness and Community Cohesion**

#### Duckwater

For Duckwater citizens, becoming a part of Eureka enhances their opportunity to have access to district services. It would allow the parents to participate in decisions involving both elementary and high school students, since both elementary and high schools would be under the same governing board.



However, the travel distances would still be great and likely would work against substantial involvement in school district governance, thus perhaps lessening responsiveness.

Pahrump

Community identity is the most important criterion to be considered in the reorganization options facing Nye County. Pahrump is distant and distinct from the rest of the county. It is a rapidly growing suburban community which is different socially, culturally, and economically from the rest of sparsely populated, rural Nye County. The district office is located in Tonopah, 175 miles away, making it difficult to access district services and to play a role in policy issues facing the district. Additionally, the needs of suburban and rural districts are different. Having two districts, one focusing on issues primarily related to rural areas, the other on suburban Pahrump, may provide a focus which would improve both situations.

**Financing and Facilities**

Duckwater

The number of students is so small, the addition or subtraction of students to one district or the other will have little impact on either district. However, the assessed value per student in Duckwater is substantially higher than the average of Nye County, although it would represent only a little over one percent of the assessed value in the county. Of course, the impact on Eureka would be miniscule.

**Assessed Value Per Pupil**

Area	Assessed Value	Pupils	AV/Pupil
Nye County	\$ 566,582,439	4,528	\$ 125,129
Duckwater	\$ 7,453,860	40	\$ 186,347
Pahrump & So.	\$ 283,904,327	2,600	\$ 109,194
Bal. of Nye	\$ 275,224,252	1,888	\$ 145,776

Pahrump

With the proposed configuration, Pahrump will have a little less than 50 percent of the assessed value of the county, with more than half the pupils. One advantage for staying in Nye to the citizens of Pahrump is that Pahrump, where the voters are and with the largest projected growth, would be able to continue to draw upon the assessed value of the entire county to provide the necessary funds to build schools. For the rest of Nye county, having Pahrump form a separate district, even though it marks a loss in assessed value, may be more than compensated for by the reduction in future debt that may have to be incurred to fund the expected growth.



From the State's perspective, proposed changes involving Nye County will have no major significance. Both Pahrump and the remainder of Nye County will still be well within the Nevada Plan.

**Per Pupil Support<sup>157</sup>**

	Nye	Pahrump
Basic Support <sup>158</sup>	\$4,018	\$4,394
Outside Support <sup>159</sup>	\$1,106	\$765
Total	\$5,124	\$5,159

As noted above, there is existing debt and some provision will need to be made explicitly for the debt to be repaid based on the current district configuration rather than on proposed district reorganization patterns.

### *Concluding Remarks on Both Options*

Whether Duckwater is a part of Nye or Eureka is a relatively small matter, affecting as it does so few students and so little assessed valuation. The majority of students are already accommodated under a satisfactory interdistrict attendance agreement with Eureka. It may be that the reorganizational stress may not guarantee enough discernible benefits to warrant a change.

On the other hand, splitting the Pahrump area and south from the rest of the county deserves serious consideration. Clearly, in terms of organizational responsiveness and community of interest, that proposed district fares well. On the issues of school finance and capital construction, there are advantages and disadvantages from the proposal, which need to be appropriately weighed. Part of the consideration regarding Nye involves its potential alignment with Esmeralda county, which we consider in full in that section of the report.

MAP strongly suggests that whatever action the Legislature decides to take on the issue of school district reorganization, the Local School Support Tax continue to be levied and collected on a county-wide basis and returned to

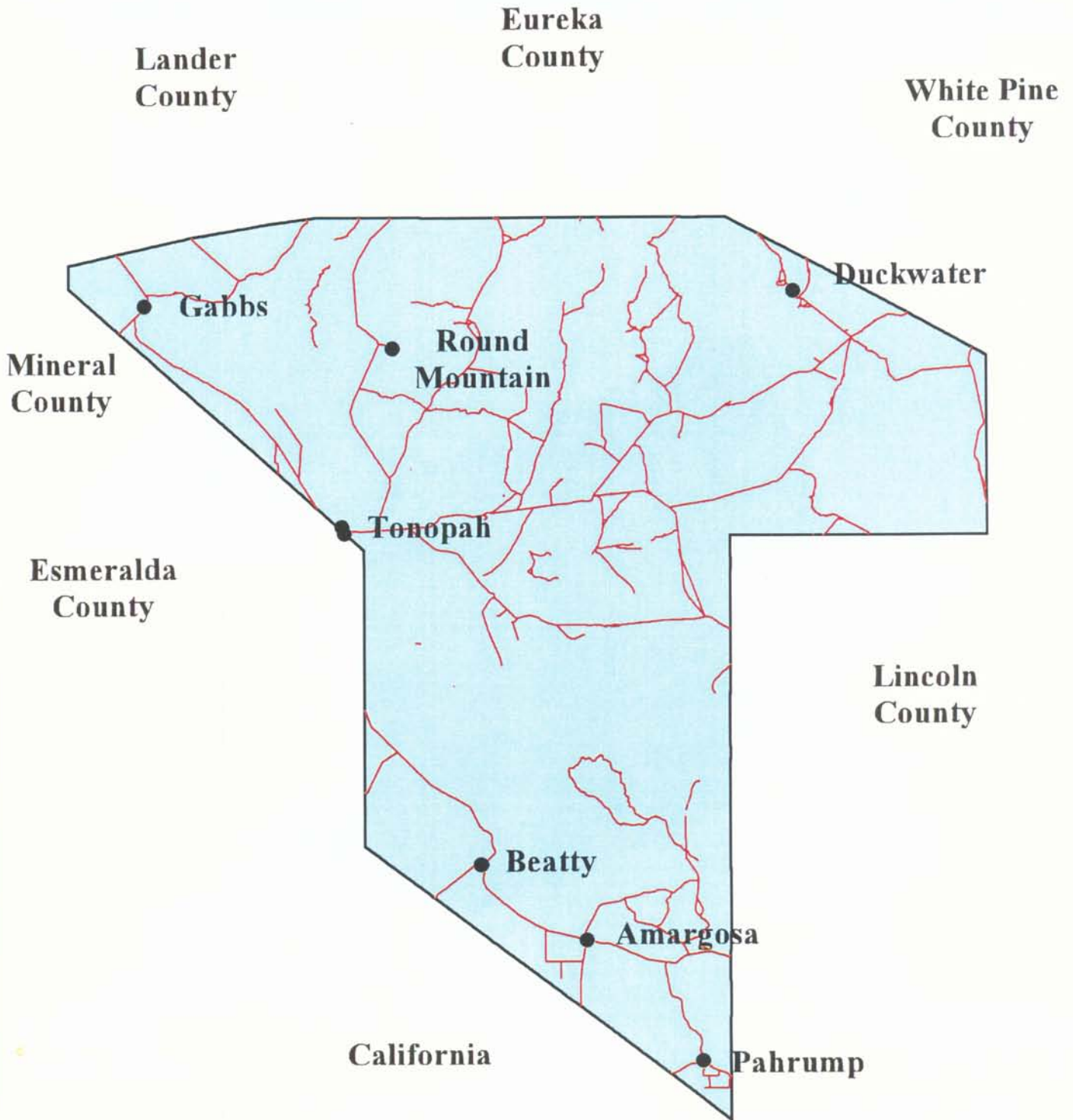
<sup>157</sup> The Nevada Plan school finance provisions require a recalculation of the Basic Support Guarantee for every district in the state any time a single district's support guarantee is altered. The figures in this chart are derived from calculations made by the Nevada Department of Education, Administrative Services unit, dated June 10, 1996.

<sup>158</sup> Basic Support includes those dollars guaranteed by the Nevada Plan formula by a combination of state and local sources.

<sup>159</sup> Revenues which fall outside the basic guaranteed amount guaranteed under the Nevada Plan. The principal source of these funds is a \$0.50 ad valorem property tax levied on each \$100 of assessed valuation. Receipts from the motor vehicle privilege tax, some federal revenues, and miscellaneous local revenues make up the balance.

districts on a per-student basis. This will be particularly important to equalization components of the Nevada Plan, and will help to stabilize funding.

# Nye County - Schools and Major Highways



## PERSHING COUNTY SCHOOL DISTRICT

<u>District Statistical Profile</u>						
County Population <sup>160</sup>						
1996 4,990						
2000 6,020						
School District Enrollment <sup>161</sup>						
1996 967						
2000 1,167						
Ethnicity of Students <sup>162</sup>						
	<u>1994</u>		<u>1983</u>			
White	71.0%		77.4%			
Black	0.1%		0.0%			
Hispanic	22.3%		11.6%			
Asian/P.I.	0.6%		1.0%			
American Indian	6.0%		10.0%			
Schools						
High	1					
Middle	1					
Elementary	2					
Licensed Employees (full time equivalent)			68			
Student Achievement <sup>163</sup> (Grade 4 percentile scores)						
	Reading	Math	Language			
State Average	51	53	57			
Pershing	44	47	51			
Student Achievement (Secondary)						
	Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M	
State Average	58	56	21.2	429	484	
Pershing	51	34	20.0	448	515	
Drop-Out Rate						
State Average	9.6%					
Pershing	3.3%					

<sup>160</sup> Nevada State Demographer, "Nevada Population Information," June 1994.

<sup>161</sup> This is a rough estimate that assumes that the overall population forecast is accurate and that the proportion of the population that is school age will remain the same.

<sup>162</sup> Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>163</sup> Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.

Sources of funding <sup>164</sup>	
Local	46.5%
State	49.6%
Federal	3.9%
Wealth and debt <sup>165</sup>	
Assessed Valuation per student	\$150,111
Net proceeds of mines per student	\$22,975
Total Outstanding Debt	\$9,420,000
Debt per student	\$9,741
Unused Debt Capacity	\$12,353,589
Tax rates <sup>166</sup>	
Debt and/or pay-as-you-go	0.5070
Combined school taxes	1.250
Highest rate in county	3.6392

The county seat and primary population center Pershing County is located in Lovelock, which is situated beside Interstate 80 about 90 miles northeast of Reno. Zoning ordinances in Lovelock tend to discourage rapid development and population increases. County-wide, population is projected to grow by 20 percent by the year 2000. About half the County's citizens live in Lovelock and most of the rest are scattered among small communities along I—80. In the Grass Valley area, in the extreme northeast corner of the county, the population has grown from 100 to 800 in the past eight years.

All but 46 of the district's 967 students attend school in the elementary, middle, or high school located in Lovelock. The District's only other school is located in the small community of Imlay, about 40 miles northeast on I—80. The 184 students from the Grass Valley area of Pershing County attend school in Winnemucca, subject to an agreement with the Humboldt County School District. Although property has been donated for a school in Grass Valley, funding has not been secured for construction. Given the relative proximity of Grass Valley to Winnemucca and its distance from the other schools in Pershing County, a case can be made for incorporating this community into the Humboldt County School District.

<sup>164</sup> Stewart, Vera L., Pershing County School District Financial Statement, June 30, 1995.

<sup>165</sup> Thunder, D., Nevada Department of Education, Preliminary report of survey of school districts, April 16, 1996.

<sup>166</sup> Ibid.

## *Application of Criteria*

### **Educational Effectiveness**

Since the students will presumably still be attending the same schools they now attend, the reorganization will likely be of negligible impact on education effectiveness.

### **Racial and Ethnic Composition**

Since the school attendance boundaries are not impacted, there would be no change in the racial or ethnic composition of the schools.

### **Organization Scale**

As Grass Valley students already attend school in Humboldt County and due to the small number of students involved, this proposal will have little discernible impact on organization scale.

### **Governmental Responsiveness and Community Cohesion**

Although this proposal merely formalizes, in a more permanent way, the current operational pattern for these students, it does carry with it the potential of added participation by parents and community members in events that relate to the schools their children attend. Under the current arrangement, community members in Grass Valley vote in Pershing County school board elections, but their children do not attend school there. Under this proposal, Grass Valley residents would be able to vote in school-board and other district elections that impact the schools their children attend.

### **Financing and Facilities**

Under the existing interagency agreement between Pershing and Humboldt, Humboldt receives from Pershing the annual marginal cost of instruction plus \$239 per student. The assessed value in the area being considered for transfer to Humboldt represents about four percent of the assessed value in Pershing and only about one percent of Humboldt's assessed value. On monetary grounds, it appears that the proposal would be marginally better for Pershing in that the proportionate assessed value loss would be less than the loss in the total number of students. It would not have a major impact on either district's ability to raise additional funds for capital outlay purposes, nor would it have substantial impact on either district's revenue.

**Assessed Value Per Pupil<sup>167</sup>**

Area	Assessed Value	Pupils	AV/Pupil
Pershing	\$ 145,157,260	967	\$ 150,111
Grass Valley	\$ 5,143,411	184	\$ 27,953
Bal. of Pershing	\$ 140,013,849	783	\$ 178,817
Humboldt	\$ 469,391,205	3845	\$ 122,078
Humb. + GV	\$ 474,534,616	4029	\$ 117,780

The proposal would have little impact on school finance provisions. Both districts would still be equalized under the Nevada Plan and there would be no significant impact on state costs.

**Per Pupil Support<sup>168</sup>**

	Pershing	Humboldt
Basic Support <sup>169</sup>	\$4,540	\$3,976
Outside Support <sup>170</sup>	\$1,075	\$902
Total	\$5,615	\$4,877

In sum, since Grass Valley students are already educated in Humboldt County, and since there are such small impacts on any of the criteria, this is the kind of matter that might best be determined by those locally involved. Citizens can elect either to continue the interagency agreement which now exists, amend it, or request that the Legislature formalize the arrangement by making the organizational change suggested here.

<sup>167</sup> Ibid.

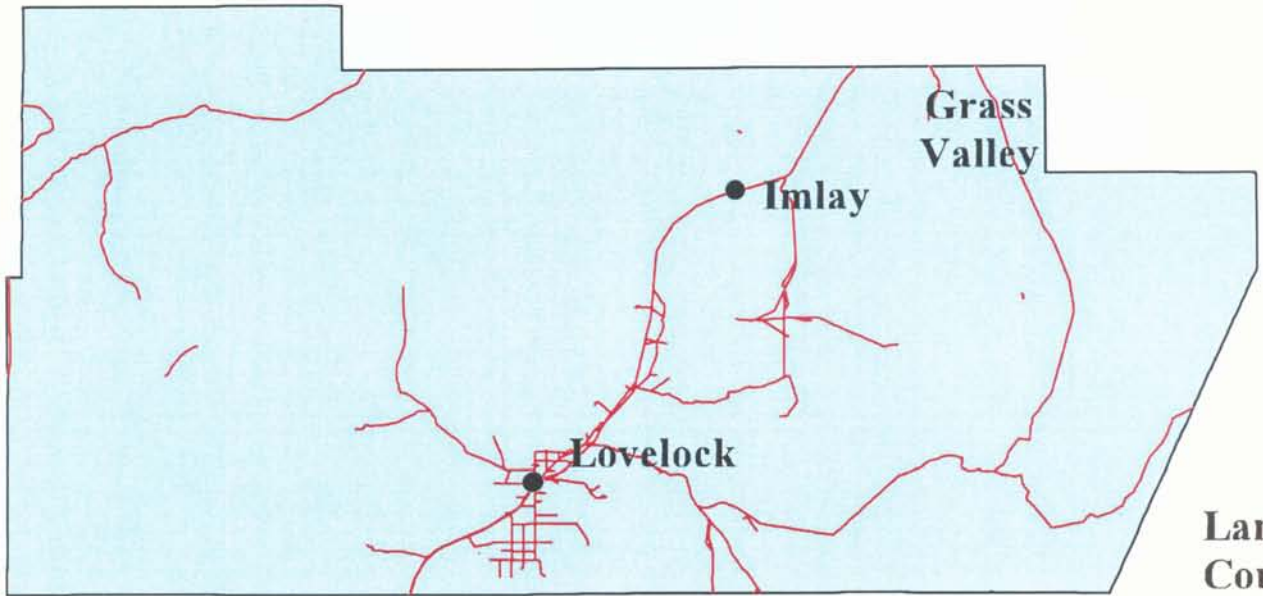
<sup>168</sup> Nevada Department of Education, "Legislature's Approved 1995-96 District Basic Support Worksheet", June 5, 1995.

<sup>169</sup> Basic Support includes those dollars guaranteed by the Nevada Plan formula by a combination of state and local sources.

<sup>170</sup> Revenues which fall outside the basic amount guaranteed under the Nevada Plan. The principal source of these funds is a \$0.50 ad valorem property tax levied on each \$100 of assessed valuation. Receipts from the motor vehicle privilege tax, some federal revenues and miscellaneous local revenues make up the balance.

# Pershing County - Schools and Major Highways

**Humboldt  
County**



**Grass  
Valley**

**Imlay**

**Lovelock**

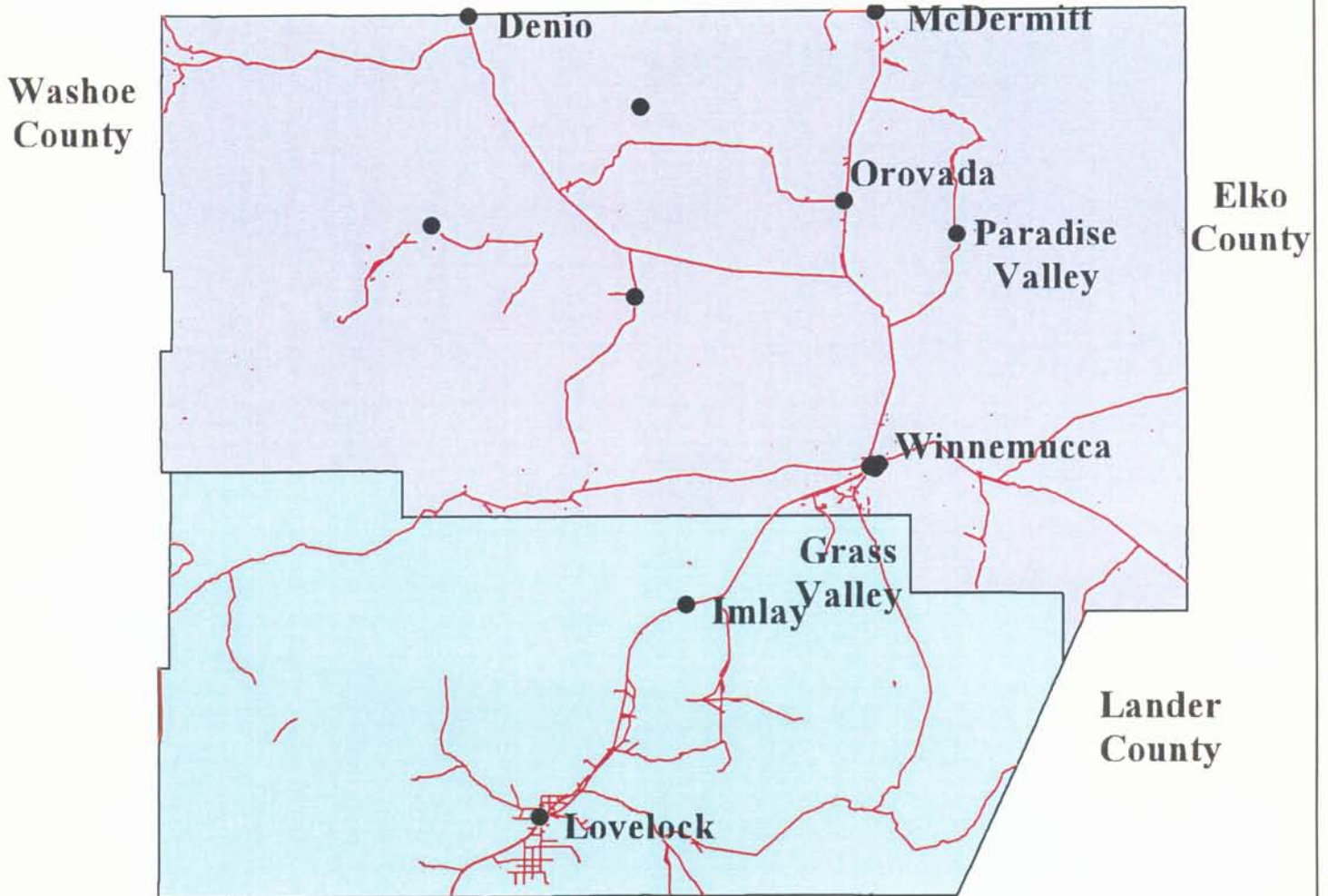
**Lander  
County**

**Mineral  
County**



# Pershing and Humboldt Counties - Schools and Major Highways

Oregon



Mineral  
County

Legend:  
[Light Blue Box] Pershing  
[Light Purple Box] Humboldt

## STOREY COUNTY SCHOOL DISTRICT

<u>District Statistical Profile</u>						
County Population <sup>171</sup>						
	1996	3,150				
	2000	3,610				
School District Enrollment <sup>172</sup>						
	1996	480				
	2000	550				
Ethnicity of Students <sup>173</sup>						
			<u>1994</u>		<u>1983</u>	
White			94.4%		96.8%	
Black			0.4%		0.5%	
Hispanic			2.5%		0.0%	
Asian/P.I.			1.7%		1.8%	
American Indian			1.0%		0.9%	
Schools						
High		1				
Middle		1				
Elementary		2				
Licensed Employees (full time equivalent)					42	
Student Achievement <sup>174</sup> (Grade 4 percentile scores)						
		Reading	Math	Language		
State Average		51	53	57		
Storey		NR	NR	NR		
Student Achievement (Secondary)						
		Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M
State Average		58	56	21.2	429	484
Storey		NR	NR	22.4	—	—

<sup>171</sup> Nevada Demographer's Office, Bureau of Business and Economic Research, "Nevada Population Estimates (1993) and Forecasts 1994—2000, December 3", 1993.

<sup>172</sup> This is a very rough estimate predicated on assumptions that the portion of the total population being school age will remain constant through the end of the decade and that the State Demographer's projection of total population is accurate.

<sup>173</sup> Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>174</sup> Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.

<b>Drop-Out Rate</b>		
State Average		9.6%
Storey		14.1%
<b>Sources of funding<sup>175</sup></b>		
Local		35.5%
State		62.6%
Federal		1.9%
<b>Wealth and debt<sup>176</sup></b>		
Assessed Valuation per student		\$182,528
Net proceeds of mines per student		\$2,178
Total Outstanding Debt		\$3,138,000
Debt per student		\$6,538
Unused Debt Capacity		\$10,003,704
<b>Tax rates<sup>177</sup></b>		
Debt and/or pay-as-you-go	0.7290	
Combined school taxes	1.4790	
Highest rate in county	3.3953	

The 3,150 residents of Storey County live in Virginia City; the Highlands (a development of about 200—250 homes in the mountains just west of Virginia City); Mark Twain (a development of mobile homes in Dayton Valley to the east); and Lockwood (a development of modular homes along Interstate 80, four miles east of Sparks). Although the District has doubled in size since 1980, growth appears to have leveled off to a little more than three percent per year. Only modest growth is forecast through the turn of the century.

Most of the County's population resides in Virginia City and the Highlands. Two other concentrations of population, Lockwood and Mark Twain, are only a few miles down the mountain; however, in both cases, these communities are several minutes away by car. There is a dirt road to Mark Twain, but it is not passable in bad weather. For residents of Lockwood, Sparks is closer and more convenient. Similarly, residents of Mark Twain are more likely to work and shop in Dayton than in Virginia City.

The total Storey County School District student enrollment of 480 attends classes in four schools. All but the 58 students at Hillside Elementary in

<sup>175</sup> Rife, Sciarani & Co., Storey County School District Financial Transactions, June 30, 1994.

<sup>176</sup> Thunder, D., Nevada Department of Education, Preliminary report of survey of school districts, April 16, 1996.

<sup>177</sup> Ibid.

Lockwood attend school in Virginia City. Virginia City High School has an enrollment of 144, which will grow by another 25—30 as the students who live in Lockwood, but currently attend high school in Washoe County, are diverted to Virginia City.

The proximity of Lockwood to Sparks, the history of their students attending high school in Sparks, and prospects of a 50—minute bus ride past a closer high school all make a case for the Lockwood community being a part of Washoe County School District. The long bus ride is particularly problematic for students who are engaged in activities that would require them to commute after normal school hours. However, it was pointed out to MAP that students from this area have no guarantee as to the Washoe high school they attend and could easily face the prospect of a similar bus ride under the current arrangement.

Approximately 140 students live in the Mark Twain area and attend elementary and high school in Virginia City. This community, in the Dayton Valley, appears to be demographically more similar to the communities in and around Dayton in Lyon County than Virginia City. In fact, the community is bisected by the county line, with some of the students attending school in Lyon and some in Storey. The arguments for incorporating Mark Twain into Lyon County School District are similar to those for incorporating Lockwood into Washoe. A year-round, paved road may substantially alter the weight of the argument against such a transfer of territory.

An additional concern raised about Storey County School District is its size. With a total enrollment of fewer than 500 and few prospects for substantial growth, two questions arise. Is the district large enough to offer a high quality educational program? Would scale economies be realized if it were consolidated with a larger district?

A review of test scores reveals no evidence that the educational program is inferior to programs offered throughout Nevada. However, an enrollment of 500 places the District at the low end of cost efficiency. Certainly, the District's ability to offer specialized programs and advanced classes, especially at the high school level, is limited. However, these limitations can easily be overcome by entering into cooperative agreements with larger neighboring school districts and institutions of higher education, and by using distance learning.

The potential boundary changes to be analyzed are to consolidate the territory comprising the attendance area for Hillside School in Lockwood into Washoe County School District; consolidate the territory associated with Mark Twain into Lyon County; and then, assuming that both of the above changes occur, consolidate Virginia City with the Lyon County School District.

There are several possible permutations to the above proposals and even additional boundary change proposals that have not been analyzed here. The following analysis is illustrative of the opportunities for and pitfalls of changing boundaries of the Storey County School District.

One option that was suggested but will not be analyzed is consolidating Storey with Washoe. Relative size and significant social and demographic differences seemed to make this proposal particularly unattractive.

## *Application of Criteria*

### **Educational Effectiveness**

#### Lockwood and Washoe County

Graduates of Hillside Elementary School in Lockwood (part of the Storey District) now attend high school in Washoe County, rather than travel the extra distance required to attend Virginia City High School. This creates a dilemma for the Storey County District. If the District continues to permit the interdistrict attendance arrangement with Washoe, it will be less able to offer the kind of high school program students deserve. On the other hand, to require students to be bussed long distances undoubtedly has a negative impact on their performance and makes it difficult for them to participate in after-school activities.

#### Mark Twain and Lyon County

Mark Twain students attend both elementary and high school in Virginia City, which requires substantial travel. This undoubtedly has some negative impacts on these students. Permitting them to attend school in Lyon County would seriously erode the capability of the Storey County schools to offer comprehensive programs for those who remain.

There is no precise way to measure these effects, but it appears that continuing to require Mark Twain students and Lockwood students to attend high school in Virginia City would allow Storey County to have a larger high school, and with that the ability to offer a broader array of high school courses for all the students in the county. Conversely, moving these students to a different district would represent a loss of approximately 41 percent of the District's student body and would dramatically reduce the District's capacity at both the elementary and secondary levels of schooling.

The Virginia City High School 1993—94 dropout rate of 14.1 percent was one of the highest in the State and should be cause for concern<sup>178</sup>. Also, the frequent turnover of superintendents in Storey County may have a long-term

<sup>178</sup>Nevada Department of Administration, Op cit.

deleterious effect on the instructional program. Otherwise, no publicly available data indicate that the instructional program is inadequate.

### **Racial and Ethnic Composition**

#### Lockwood and Washoe County

There would be no change for students in elementary school in Lockwood since they would continue to attend elementary school at Hillside Elementary. Since they also now attend high school in Sparks, there would be no impact on high school racial and ethnic composition.

#### Mark Twain and Lyon County

Racial and ethnic data on these students were not available at the time of this analysis.

### **Organization Scale**

#### Lockwood and Washoe County

The proposal to merge Lockwood with Washoe County, while having only a small impact on Washoe County, would diminish the ability of Storey County to improve its schools. Dealing with Lockwood alone would slightly reduce the capacity of the Storey County District office. It would have only a marginal impact on Washoe County.

#### Mark Twain and Lyon County

The proposal for Mark Twain to join Lyon County would also have only a small impact on Lyon County, but would have a much greater negative impact on Storey County.

The combined impact of the two proposed changes seriously calls into question Storey's future viability.

### **Governmental Responsiveness and Community Cohesion**

#### Lockwood and Washoe County

For the citizens of Lockwood, connecting their territory and Hillside Elementary School with the nearby community of Sparks in Washoe County would probably provide them with some additional opportunities to participate in decision-making affecting their children and provide better linkages between elementary and secondary schools than now exist. On the other hand, being only a very small part of the much larger Washoe County may reduce the ability of citizens to impact district policies which affect their children.

### Mark Twain and Lyon County

Many of the same arguments discussed above apply to this proposed split. In addition, in terms of governmental responsiveness and community cohesion, since part of the community is split between the two counties, it probably makes more sense to unify the community by placing the district in one county or the other (either Storey or Lyon). One possibility would be to annex the other part of Mark Twain to Storey County. This might prove to be a viable proposal if the most direct road between Mark Twain and Virginia City could be paved.

If as a result of the loss of these two communities the Legislature opts to merge Lyon County and Storey School Districts, the resultant district would be substantially larger and far more remote for the citizens of Virginia City and the Highlands.

### **Financing and Facilities**

Removing Lockwood from Storey would reduce the assessed value in the county by about 10 percent. The number of students who now attend elementary school in Storey County would be reduced by about 12 percent. Mark Twain's possible alignment with Lyon County would have a much smaller impact on assessed value (about 6%), but a large impact on the size of the student body (a 29% loss). Linking Lockwood to Washoe County would have a miniscule financial impact on Washoe, as would connecting Mark Twain to Lyon County. Clearly, the loss of the students would have greater impact than the loss of assessed value.

**Assessed Value Per Pupil<sup>179</sup>**

Area	Assessed Value	Pupils	AV/Pupil
Storey County	\$ 87,611,363	480	\$ 182,524
Lockwood	\$ 8,813,178	58	\$ 151,951
Mark Twain	\$ 4,909,817	140	\$ 35,070
Bal. of Storey	\$ 73,888,368	282	\$ 262,015
Lyon County	\$ 425,487,124	5,426	\$ 78,416
Washoe County	\$ 5,863,539,334	47,572	\$ 123,256

If the Legislature elects to permit students from Lockwood and Mark Twain to leave Storey County, Storey, already very small, becomes so small as to bring into question its ability to continue to function as a viable school district. Under these circumstances, consideration may be given to unifying Storey County schools with Lyon County.

<sup>179</sup> Thunder, D., op cit.

Lyon County is one of the lowest assessed-value-per-pupil counties in Nevada. The addition of the students from Storey County would increase the property tax base for Lyon County, but even the combined counties would not appreciably increase ability to fund school construction needs. Citizens in Virginia City would have legitimate concerns about becoming only a small part of a much bigger county.

**Assessed Value Per Pupil<sup>180</sup>**

Area	Assessed Value	Pupils	AV/Pupil
Storey County	\$ 87,611,363	340	\$ 257,680
Lyon County	\$ 425,487,124	5,426	\$ 78,416
Combined	\$ 513,098,487	5,766	\$ 88,987

Under any of the proposals, the Nevada Plan would be impacted only slightly. Some adjustments would be necessary for transportation costs, special education, and school size formulas. The total impact of these kinds of changes would be relatively small. Adding Mark Twain to Washoe would have a miniscule impact on Washoe County, as would adding Lockwood to Lyon County. Combining Storey County (minus Mark Twain) to Lyon County would yield the following estimated revenue streams.

**Per-Pupil Support<sup>181</sup>**

	Bal. of Storey	Lyon County
Basic Support <sup>182</sup>	\$5,651	\$4,474
Outside Support <sup>183</sup>	\$1,172	682
Total	\$6,823	\$5,156

In sum, Storey County presents the classic dilemma of appropriately balancing the needs of different groups of students. On most of the criteria, the impact is mixed. What may be good for one group of students may be harmful to another. Clearly, the loss of these two areas would cause serious questions about the viability of the remaining entity. Additionally, addressing this problem by uniting the two counties creates problems of government responsiveness.

<sup>180</sup> Ibid.

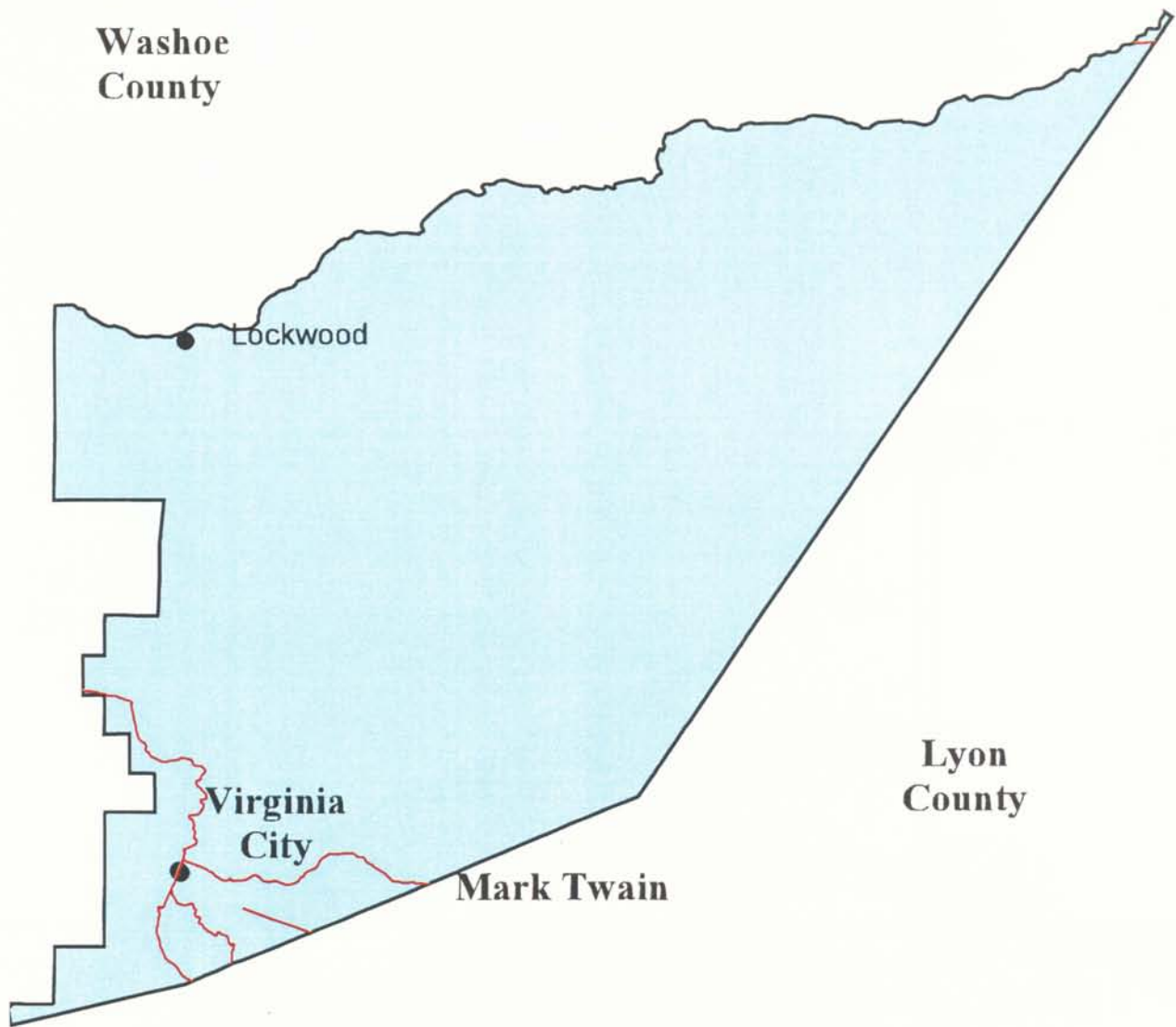
<sup>181</sup> The Nevada Plan school finance provisions require a recalculation of the Basic Support Guarantee for every district in the state any time a single district's support guarantee is altered. The figures in this chart are derived from calculations made by the Nevada Department of Education, Administrative Services unit, dated June 10, 1996.

<sup>182</sup> Basic Support includes those dollars guaranteed by the Nevada Plan formula by a combination of state and local sources.

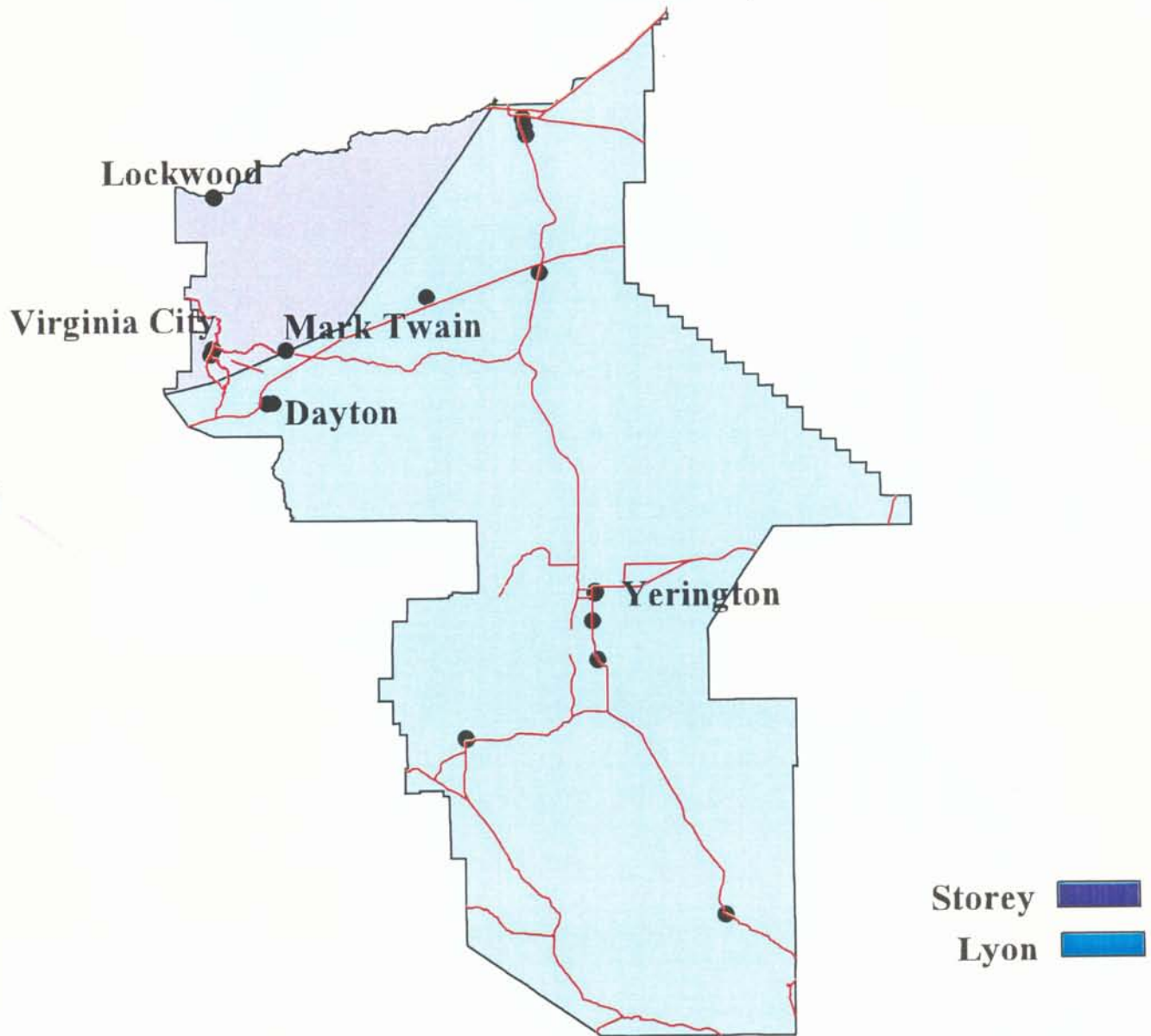
<sup>183</sup> Revenues which fall outside the basic amount guaranteed under the Nevada Plan. The principal source of these funds is a \$0.50 ad valorem property tax levied on each \$100 of assessed valuation. Receipts from the motor vehicle privilege tax, some federal revenues and miscellaneous local revenues make up the balance.



# Storey County - Schools and Major Highways



# Storey and Lyon Counties - Schools and Major Highways



# Storey and Washoe Counties - Schools and Major Highways

Oregon

California

Humboldt  
County

Pershing  
County

Churchill  
County

Gerlach  
Empire

Repos  
Sparks

Lockwood

Mark Twain

Incline  
Village

Lake  
Tahoe

Virginia  
City

Storey  
Washoe



## WASHOE COUNTY SCHOOL DISTRICT

### District Statistical Profile

#### County Population<sup>184</sup>

1996 295,390

2000 317,850

#### School District Enrollment

1996 47,572

2000 56,180<sup>185</sup>

#### Ethnicity of Students<sup>186</sup>

White

1994

76.8%

1983

86.4%

Black

2.9%

2.5%

Hispanic

13.1%

5.3%

Asian/P.I.

4.5%

3.5%

American Indian

2.7%

2.3%

#### Schools

High 10

Middle 11

Elementary 54

Alternative and special education 4

Regional Occupation Program 1

#### Licensed Employees (full time equivalent)

2,972.4

#### Student Achievement<sup>187</sup> (Grade 4 percentile scores)

	Reading	Math	Language
State Average	51	53	57
Washoe	53	54	58

#### Student Achievement (Secondary)

	Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M
State Average	58	56	21.2	429	484
Washoe	58	50	21.4	434	489

<sup>184</sup> Nevada State Demographer, Nevada Population Information, June 1994: Medium estimates.

<sup>185</sup> Washoe County School District, Past Enrollment History and Projections, November 1995.

<sup>186</sup> Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>187</sup> Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.

<b>Drop-Out Rate</b>		
State Average		9.6%
Washoe		8.6%
<b>Sources of funding<sup>188</sup></b>		
Local		75.9%
State		19.7%
Federal		4.4%
<b>Wealth and debt<sup>189</sup></b>		
Assessed Valuation per student		\$123,256
Net Proceeds of mines per student		\$40
Total Outstanding Debt		\$237,645,000
Debt per student		\$4,995
Unused Debt Capacity		\$641,885,900
<b>Tax rates<sup>190</sup></b>		
Debt and/or pay-as-you-go	0.3635	
Combined school taxes	1.1135	
Highest rate in county	3.3955	

Washoe County is located in the northwest corner of the state and covers an area of 6,600 square miles. It is the second most populous county in Nevada, with nearly 300,000 citizens, and is projected to grow at an average annual rate of two to three percent for the rest of the decade. Most of the population resides in the southern part of the County in an area known as Truckee Meadows, which includes Reno, Sparks, and surrounding unincorporated areas. Just over 7,000 people live in and around the Lake Tahoe resort of Incline Village. Other population centers tend to be small, rural, and remote. The services and wholesale-retail trade sectors employ approximately 64 percent of the area workforce. Government employs another 13 percent.<sup>191</sup>

The District operates 80 schools. With the exception of the mostly small rural schools in Empire, Gerlach, Verdi, and Wadsworth, virtually all students attend school in Reno, Sparks, or Incline Village. Enrollment has grown about four percent per year for each of the last several years. Projected enrollment growth indicates the immediate need for two new high schools, two new middle schools and six new elementary schools.<sup>192</sup>

<sup>188</sup> Kafoury, Armstrong & Co., Washoe County School District Financial Report, June 30, 1995.

<sup>189</sup> Thunder, D., Nevada Department of Education, Preliminary report based on district survey, April 16, 1996.

<sup>190</sup> Washoe County School District, Report to Debt Management Commission, November 1995.

<sup>191</sup> Regional Planning Agency, Truckee Meadows Regional Plan, January 10, 1996.

<sup>192</sup> Washoe County School District, Report to Debt Management Commission, November 1995.

With the notable exception of Incline Village, any school district boundary issues in Washoe County are likely related to district size and the attendant philosophical and political issues of responsiveness of the District to its clients. It would appear that the District maintains good relations with its clients. One measure of client satisfaction is the willingness of voters to tax themselves to pay for school construction. Voters in Washoe County have never defeated a school bond.<sup>193</sup> The most recent bond election was held in 1992; the next is planned for September 1996. Even though taxes for schools are relatively low, the overall county tax rate is fourth highest in the state.

The District operates an elementary, middle, and high school for about 1400 students in the resort community of Incline Village. It is separated from Reno by 35 miles and a 9,000-foot mountain. Unlike the rapidly growing population in the Truckee Meadows area, the Incline Village population is relatively stable. Many property owners are absentee and many are retired. Some residents of Incline Village advocate seceding from the Washoe School District citing three main reasons. The first is that they are a different community of interest with a different cultural identity from Reno. Because of their small numbers, they are unable to achieve adequate representation of their perspective on the governing board. Second, Incline Village represents approximately 11 percent of the county's 1994—95 assessed valuation and only about three percent of the student population. Incline citizens expressed concern about their tax rates generally and more specifically the costs of debt service. Third, the growth and other problems in the valley cause the district to pay inadequate attention to the needs and concerns of Incline Village.

The following is an analysis of the implications of creating a separate district in the attendance area of the Incline Village schools.

### Application of Criteria

#### Educational Effectiveness

For this proposed organization, there is little evidence that educational effectiveness would be materially altered. Since *school* attendance areas would not be impacted by the proposed organization plan and students who reside in Incline Village would presumably continue to go to school there, there would be no change in distances youngsters travel to school and no change in the socioeconomic makeup of the student body. Again, because this proposal does not alter school attendance boundaries, breadth of the curriculum will presumably increase as the student bodies grow; but this would happen, as well, under the current district configuration. From all indications, aside from the geographical separation of the Incline Village and

<sup>193</sup> Washoe County Financial Report, Op cit.

the Reno-Sparks schools, there are only small intradistrict differences in terms of the traditional student performance measures, none of which would warrant concern. In addition, although student performance data are quite similar, the programs in the schools appear to be distinctive, reflecting the needs of the community. MAP's visits to Washoe County generated evidence that schools were permitted and even encouraged to be responsive to their communities.

### **Racial and Ethnic Composition**

Since the school attendance boundaries are not impacted, there would be no change in the racial or ethnic composition of the schools.

### **Organization Scale**

The current district configuration falls on the high side of acceptable size for economy of scale operation. It is not yet so large as to warrant immediate concern. The proposed new district, especially initially, will be at the low end of the optimal size and may have slightly higher administrative costs per-pupil than is now the case in the short term; but it is within the band of cost-effective school district size. Over time, any higher administrative costs may be mitigated by enrollment growth. Some specialized support services which are now available from the Washoe County District office may not be available to students in the new district, simply because the relatively small size will not allow much specialization. In sum, while creating two districts of vastly different sizes, neither would seem to have noticeable economy-of-scale benefits or disadvantages.

### **Governmental Responsiveness and Community Cohesion**

In applying this criterion, we look first to ensure that we are not breaking up an existing community of interest. It is clear that Incline Village views itself as distinct from the rest of Washoe county. This proposal would not break up an existing community of interests. From all available information it appears that Incline Village would meet any reasonable standard for being its own community of interest, distinct from the rest of Washoe County.

The next and lesser test is to assure that the desires of distinctive communities are being met within the organization configuration which exists. One of the ways in which school districts can mitigate lack of responsiveness is to allow sufficient school-based decision-making to ensure that communities, and especially parents, have a strong say in the number in which schools their children attends operates. It generally is the case that parents and citizens are most concerned about the schools in their own communities as opposed to the district as a whole. It is only when the district



imposes its will on schools in such a way that parents feel their local schools are not reflecting the needs and desires of that community that the attention turns to the district level. Washoe County apparently has done a good job in encouraging local communities to participate in local school activities and is responsive to their distinctive needs.

### Financing and Facilities

It is on this dimension that this proposal deserves the greatest attention. We should first note that schools in Incline Village receive more revenue per child than their average counterparts in the other parts of the District. This is a function of the smaller size of the schools in Incline and is perfectly consistent with the way the school finance mechanism is designed to work in Nevada.

An important difference between the Incline and the Reno-Sparks portions of the County is assessed value per child. Incline has relatively high assessed value and is relatively sparsely populated. The resulting assessed value per child varies significantly between the two portions of the existing district. The extent of the disparity can be displayed dramatically by noting that only three percent of Washoe County students reside in Incline but that same area contains approximately eleven percent of the assessed value of the district.<sup>194</sup>

Assessed Value Per Pupil<sup>195</sup>

Area	Assessed Value	Pupils	AV/Pupil
Washoe County	\$ 5,863,539,334	47,572	\$ 123,256
Incline Village	\$ 671,984,690	1,307	\$ 514,143
Bal. of Washoe	\$ 5,191,554,644	46,265	\$ 112,213

The Incline Village portion of the District has a little more than four-and-a-half times the capacity to generate revenue on a per-pupil basis with the same tax rate. Put differently, a \$0.10 tax rate in Incline Village would raise as much revenue per pupil as would a \$0.46 tax rate in the remainder of the County.

Turning now to operating expenses, just as Incline Village maintains an advantage in assessed value per pupil, the remainder of the County enjoys an advantage in sales tax receipts per pupil. However, these differences are not enough to offset the assessed value differences, and the formation of this new district would create another district which would fall outside the equalization provisions of the Nevada plan.

<sup>194</sup> Nevada Department of Education analysis.

<sup>195</sup> Thunder, D., op. cit.



### Local School Support Tax per Pupil

Area	LSST	Pupils	LSST/Pupil
Washoe County	\$ 94,117,176	47,572	\$ 1,978
Incline Village	\$ 1,550,000	1,307	\$ 1,186
Bal. of Washoe	\$ 92,567,176	46,265	\$ 2,001

In terms of total revenue per pupil, the proposed split would produce the following:

#### Per-Pupil Support<sup>196</sup>

	Washoe	Incline Village	Bal. of Washoe
Basic Support <sup>197</sup>	\$3,257	\$1,874	\$3,304
Outside Support <sup>198</sup>	\$897	\$2,834	\$839
Total	\$4,154	\$4,708	\$4,143

The major negative impact of this proposal is the creation of a new district which falls outside the equalization provisions of the Nevada Plan. In addition, because the state would lose the equalization contribution of the new district, there would be an additional state cost of almost \$500,000. Because the assessed value per student is so much higher in Incline, the issue of school construction would be heavily impacted by any reorganization. Of critical importance in this discussion is how the existing bonded indebtedness is to be treated. MAP strongly recommends that the Legislature maintain the county levy, irrespective of the future boundary changes.

Finally, Washoe is, with or without Incline Village, at best, a moderate assessed value district. Losing Incline Village's assessed value reduces the average assessed value per pupil in the remainder of the County by about \$11,000.

In summary, creating a separate school district in Incline Village would have little impact on educational effectiveness, organizational scale, or racial isolation. Residents would need to consider the cost of loss of services from the existing school district. This proposal receives a high score on reinforcing an identifiable community of interest. The fiscal impact is less positive. The creation of a new district outside the equalization provisions of the Nevada Plan and the resultant increase in state costs plus the assessed value

<sup>196</sup> The Nevada Plan school finance provisions require a recalculation of the Basic Support Guarantee for every district in the state any time a single district's support guarantee is altered. The figures in this chart are derived from calculations made by the Nevada Department of Education, Administrative Services unit, dated June 10, 1996.

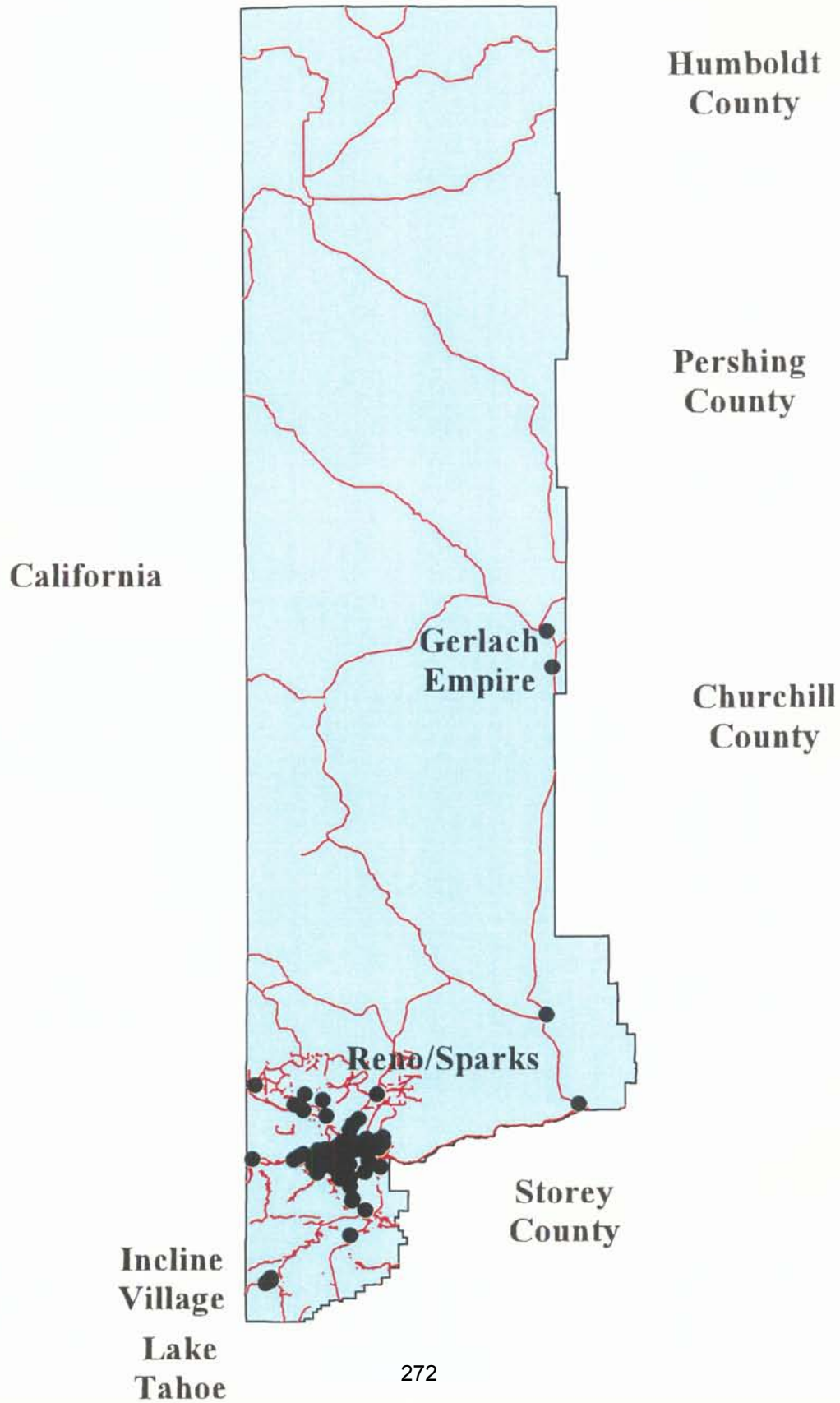
<sup>197</sup> Basic Support includes those dollars guaranteed by the Nevada Plan formula by a combination of state and local sources.

<sup>198</sup> Revenues which fall outside the basic guaranteed amount guaranteed under the Nevada Plan. The principal source of these funds is a \$0.50 ad valorem property tax levied on each \$100 of assessed valuation. Receipts from the motor vehicle privilege tax, some federal revenues, and miscellaneous local revenues make up the balance.

differences which would result are negative features of the proposal. The Truckee Meadows area of Washoe would be faced with essentially the same capital needs as exist currently, but would have only 89 percent of its current assessed value to tax, thus requiring a higher tax rate to repay any bond. Incline Village, on the other hand, would enjoy a windfall of substantially lower tax rates for future construction. Continuing the countywide tax for existing bonded indebtedness, and state participation in some form of a state-equalized construction program, would mitigate this second factor.

# Washoe County - Schools and Major Highways

Oregon



## WHITE PINE COUNTY SCHOOL DISTRICT

### District Statistical Profile

#### County Population<sup>199</sup>

1996 10,160

2000 10,870

#### School District Enrollment<sup>200</sup>

1996 1,980

2000 2,065

#### Ethnicity of Students<sup>201</sup>

	<u>1994</u>	<u>1983</u>
White	85.4%	86.4%
Black	0.1%	0.1%
Hispanic	10.4%	9.7%
Asian/P.I.	0.5%	0.9%
American Indian	3.6%	2.9%

#### Schools

High	2
Middle	1
Elementary	5

Licensed Employees (full time equivalent) 119

#### Student Achievement<sup>202</sup> (Grade 4 percentile scores)

	Reading	Math	Language
State Average	51	53	57
White Pine	41	42	48

#### Student Achievement (Secondary)

	Gr. 8 Read	Gr.8 Math	ACT	SAT V	SAT M
State Average	58	56	21.2	429	484
White Pine	59	57	21.1	439	488

<sup>199</sup> Nevada Demographer's Office, Bureau of Business and Economic Research, "Nevada Population Estimates (1993) and Forecasts 1994-2000", December 3, 1993.

<sup>200</sup> This is a very rough estimate predicated on assumptions that the portion of the total population being school age will remain constant through the end of the decade and that the State Demographer's projection is accurate.

<sup>201</sup> Nevada Department of Administration, "Nevada Statistical Abstract 1994 Edition".

<sup>202</sup> Smith, David L. Analysis of Nevada School Accountability System School Year 1993-94, January 1996.

Drop-Out Rate	
State Average	9.6%
White Pine	4.5%
Sources of funding <sup>203</sup>	
Local	43.2%
State	53.9%
Federal	2.9%
Wealth and debt <sup>204</sup>	
Assessed Valuation per student	\$81,940
Net proceeds of mines per student	\$2,525
Total Outstanding Debt	\$8,990,000
Debt per student	\$4,540
Unused Debt Capacity	\$9,361,218
Tax rates <sup>205</sup>	
Debt and/or pay-as-you-go	0.7500
Combined tax rate	1.5000
Highest rate in county	3.6400

White Pine County population has grown 12 percent since 1980, primarily due to modest growth in mining. Significant additional growth is not projected for the foreseeable future. A recently opened maximum security prison provides approximately 350 jobs and is seen as a major boost to the economy. However, the economy has never fully recovered from the closing of copper mines more than a decade ago.

Ely, the county seat, is located approximately in the center of the County. With a population of just over 4,800, it is the largest town and the center of commerce. Even so, Ely is isolated by long distances from the next population center of any size. Elko is the nearest large town, approximately 200 highway miles north.

All but about 300 of the students attend schools in Ely, and none of the remote schools are located great distances from Ely. The tiny secondary school in Lund, with only 61 students in grades 7—12 (down from 73 in 1995), remains open because of special legislation requiring the district to operate a high school in Lund.

<sup>203</sup> McMullen McPhee & Co., White Pine County School District Financial Report, June 30, 1995.

<sup>204</sup> Thunder, D., Nevada Department of Education, Preliminary report of survey of school districts, April 16, 1996.

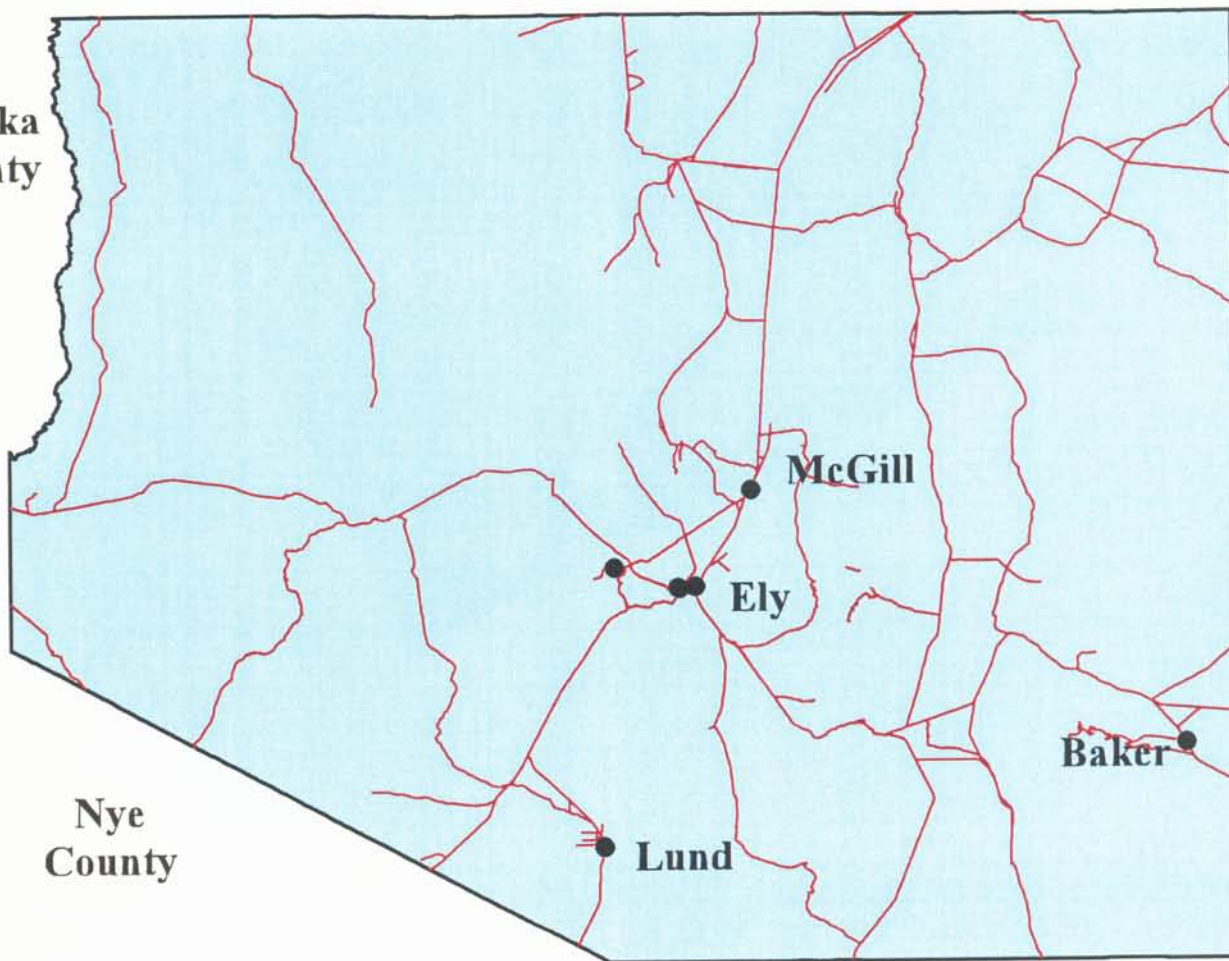
<sup>205</sup> Ibid.

School district infrastructure, especially school buildings, appears to be in poor repair. The District did open a new high school in September. For a number of reasons, the cost of construction exceeded the funds available from bonds. It is reported that a previous superintendent transferred funds from the general fund to cover construction costs and ultimately was unable to cover District operating expenses. The Legislature appropriated sufficient funds to keep the district solvent; but \$300,000 for each of the next ten years will be required to repay the state. The District is currently being operated by the State Department of Taxation. Even with the state bail-out, the District lacks sufficient funds to landscape the grounds of the new school or to pave the parking lot. The school tax rate and overall county tax rate are at the maximum allowable under current law and the highest in the state.

# White Pine County - Schools and Major Highways

Elko  
County

Eureka  
County



Utah

Nye  
County

Lincoln  
County

## APPENDICES





## APPENDICES

The appendices which follow provide additional useful background information and supporting data relevant to this study of Nevada school district organization.

**Appendix A** describes the research and analytic methodologies employed by MAP in the course of this study.

**Appendix B** offers a description of the Nevada Plan, the state's school finance funding mechanism.

**Appendix C** is the complete text of a paper on employing technology for educational purposes, commissioned by MAP for this study.

**Appendix D** is an annotated bibliography of research studies and findings regarding the effects of school and district size on matters such as educational cost and student achievement.



## **Appendix A**

### **Methodology**



## METHODOLOGY

MAP's research and analytic efforts for this study began in November 1995 and proceeded in three overlapping phases: data collection, analysis and synthesis, and reporting. This section of the report briefly describes MAP's activities in each phase.

### *Data Gathering*

MAP approached this study without any preconceived notions regarding whether existing school district borders are optimal, whether specific changes are desirable, or even if changes are feasible. We set out first to gain a better understanding of the environment in which Nevada school districts operate.

MAP representatives visited every school district and listened to anyone who would talk to us about their schools. We visited the schools, ate in the restaurants, read the local papers, and toured the towns. We talked with a taxi driver in Las Vegas, a waitress in Eureka, a developer in Incline Village, and a miner in Elko. We talked with students, parents, educators, school board members, casino owners, and reporters. We collected information from school districts, county assessors, regional planners, state agencies and any other entity that was able to provide relevant data. We held at least one public forum in each school district, and we invited written comments from any interested party.

While MAP does not claim to have gained detailed knowledge of any school district from these relatively short visits, the first-hand experience of conversations with local citizens, combined with the "hard" data gathered from official sources, heightened our awareness of the realities of life in the communities and deepened our respect for the educators who work there.

Figure 6 displays specific dates on which we visited Nevada communities.

Figure 6

Schedule of School District Visits	
November 28, 1995	Eureka
November 29, 1995	Lincoln
November 30, 1995	White Pine
December 11, 1995	Nye
December 12, 1995	Esmeralda
December 13, 1995	Mineral
December 18, 1995	Carson City
January 8, 1996	Storey
January 9, 1996	Lyon
January 10, 1996	Douglas
January 16—19, 1996	Clark
January 25—26, 1996	Washoe
January 31, 1996	Pershing
February 1, 1996	Churchill
February 6, 1996	Elko
February 7, 1996	Humboldt
February 8, 1996	Lander

From the conversations, impressions, and data, MAP was able to identify a range of concerns Nevada citizens have regarding their schools. We did not uncover widespread unhappiness with schools in Nevada, nor was there universal satisfaction. In virtually every county, we met people who found much to admire about their schools; but we always encountered others who expressed some large or small concern or complaint about their schools. MAP did not attempt to determine how representative these views were of the larger community. Instead, we took nearly every suggestion for change as fodder for further analysis.

Some suggestions did not lend themselves to further analysis because they effectively duplicated a similar suggestion, or they clearly would lead to some illegal or otherwise undesirable result. We concluded early on that some of the problems our research uncovered were unrelated to school district boundaries or were impervious to any reasonable solution. Financing of school construction and the relative dearth of technology in the rural areas are examples of the former. Small schools and isolation are examples of the latter. The suggestions that survived were analyzed and are discussed in detail in this report.

As citizens described features of their schools that were important to preserve and concerns about possible changes, we began to formulate criteria against which any change should be measured. Citizens, for example, expressed a strong preference for schools that reflect the priorities and preferences of the local community; hence, the criteria on community cohesiveness and responsiveness. Concerns about equity influenced criteria on financing, facilities, and racial isolation. In this fashion, each criterion was shaped by the concerns and aspirations of Nevada residents interested in their schools.

School district administrators were asked to provide:

1. Enrollment data for the past 3—5 years and future projections by district and by school;
2. Student demographics by school and by racial and ethnic group;
3. Student achievement data for the past 3—5 years;
4. School feeder patterns: elementary to middle to high school;
5. Salary schedules and benefits for teachers, administrators, and classified employees for the past 3 years, if available;
6. Union contracts for certified and classified employees;
7. Financial information: most recent financial statements, budgets, audit reports, reports of district indebtedness, capital outlays, developer fees and levies;
8. Building programs, projections and plans for future building programs;
9. Assessed valuation of property within district boundaries;
10. District maps, showing distances between schools, if available;
11. County and/or city general plans for future growth and development within district boundaries; and
12. Any other information which would help MAP understand the school district.



## *About The Data in This Report*

The data reported here are derived from the most recent sources available to MAP. Population data were gathered from the State Demographer reports. Conflicting estimates of current population were encountered for nearly every county. Without the resources to reconcile these differences, we chose to cite data from the Demographer. Though more recent estimates may have been available in some cases, utilizing data from the State Demographer facilitated consistency in making comparisons.

Current school district enrollments and achievement data<sup>206</sup> are the most recently available from the State Department of Education and are assumed to be accurate. Where school districts had their own projected enrollments through 2000, these forecasts were used. In cases in which no better estimates of future enrollments were available, estimates based on forecast county population, were made. These estimates, while sufficiently reliable to anticipate enrollment trends, should not be used for other purposes.

Assessed valuation and debt per student were calculated using current enrollment reports and wealth and debt data from an unpublished report of the State Department of Education. Carryover funds are not included. Student data are presumed accurate, but Department of Education officials consider the wealth and debt data to be preliminary. Analyses of the fiscal effect of boundary changes are based on the best assessed valuation available from county assessors. Net Proceeds and Assessed Value amounts are unadjusted.

Sales tax revenues were assumed to be uniform countywide and an equal per-student rate was imputed.

For each county the "highest tax rate" was calculated. In any given county, not all parcels are taxed at the same rate. Depending on location, the total taxes levied on a parcel may include the sum of school taxes, city taxes, water district taxes, and various other assessment districts. Unlike school districts, most entities are able to tax only a portion of the property in a county. Cities, for example, can tax only property located in their boundaries. The "highest tax rate" reported in the profiles is that rate applied to those parcels where the sum of all overlapping taxes in the county produces the highest overall tax rate in the county.

<sup>206</sup> School district achievement data should be interpreted with caution. Testing less than the complete cohort tends to inflate aggregate scores. Only when a district reports scores of 95%—98% of the eligible pupils should the reader be confident that the aggregate scores reflect the achievement levels of students in that district.

## Analysis

In its third report to the Legislature, MAP outlined the criteria which, in our judgment, best represents the school district organization concerns expressed by the citizens of Nevada. Five areas are addressed regarding each of the potential school district reorganization proposals. The proposed reorganization's impact is examined in terms of potential effects on:

1. Educational Effectiveness
2. Racial and Ethnic Composition
3. Organization Scale
4. Governmental Responsiveness and Community Cohesion
5. Financing and Facilities

MAP applied these criteria to each of the proposed reorganization options.

In the chapter regarding financing and facilities, MAP made some assumptions for ease of comparison and timeliness. These assumptions are preliminary and will be augmented by a proposal-by-proposal analysis of the impact of each option on the Nevada Plan, to be conducted by the Department of Education.

For our preliminary purposes, we first analyzed whether or not the proposed new district would have an adverse impact on the Nevada Plan equalization provisions. We then examined assessed value per pupil under existing law, and attempted to impute the new assessed value for each new entity which might be created if a special proposal was adopted. This effort was important for two reasons: to assess the impact on school construction and to assess the impact on the Nevada Plan.

For purposes of our analysis, we imputed the Guaranteed Student Support and Local School Support Tax on a county-wide basis and then allocated the revenue back on a pro rata per-student amount. This "blended" revenue stream is one way to allocate resources when a split occurs. It is, of course, less precise than a recomputation of the Nevada Plan for each of the proposals. Because the Nevada Plan is a fixed sum appropriation, any change in formula for one component effects all other components. To achieve a precise measure of the impact on the Nevada Plan, one would need to conduct the analysis on all the interactions of all the proposals, a task MAP did not attempt. Rather, we assumed that each proposal would be assessed against the status quo. For these purposes, we used the most current available worksheet on the Nevada Plan from the Department of Education.

Data for the district simulations was obtained from the Clark County Assessors Office and the Clark County School District.

The Assessor's Office provided the following: coverages for precincts, all streets, major streets, a data table containing assessed valuation per parcel, the street address of each parcel, and 1990 census coverage and selected data.

The school district provided address and demographic information for 156,421 of the approximately 168,000 students enrolled in 1995—96.

These data were processed using ArcView and Arc/Info programs from Environmental Systems Research Institute, Inc. (ESRI). The data were aggregated to provide summary statistics for each census block. This process involves some compromises, as a given census block does not exactly match a set of precincts or necessarily fit within a single precinct, meaning that entities created using census tracks will not exactly match to existing precinct boundaries. The aggregation of data, as it relied on matching locations (parcels and students) to street locations, resulted in some "lost" data that is not reflected in the overall totals for candidate districts. As a result, these overall numbers reflect 97% of actual student population and 92% of the total assessed valuation.

The aggregated data were processed using a program call AVDistrict, also from ESRI. This program allows for candidate districts to be created by combining census blocks and their attached data, producing summary data about the characteristics of the districts as they are created.

County maps were created in ArcView using Dynamap/100 from Geographic Data Technology. The highways are current to 1995. Those displayed on the maps are, in general, county and state highways or better. School locations were also plotted from the same source.

## Reporting Mechanisms

MAP's first progress report for this study was an oral presentation to the Subcommittee on December 5, 1996 in Las Vegas. The purpose of this presentation was to describe MAP's plans for completing the study and to obtain direction from the Subcommittee. At the direction of Senator McGinness, additional publicity for the public input forums was ordered.

The first written report was submitted on February 6, 1996. This report, summarized in a public hearing conducted by the subcommittee in Elko, described the status of data gathering in general and school district visits in particular. In addition to responding to questions and direction from the subcommittee, MAP analysts responded to questions from members of the public who attended the hearing.

The third report, also written, was presented to the Subcommittee on April 23, 1996. This document provided historical and contemporary context, described the major issues to be addressed and outlined boundary changes to be analyzed and possible alternatives to modifying district boundaries in Clark County. Members of the Subcommittee were invited to comment on the various proposals and suggest other proposals for analysis. At Senator Porter's direction, further consideration of the possible consolidation of Elko and Eureka County School Districts was analyzed.

Each of these progress reports served dual purposes. They provided subcommittee members regular opportunities to be apprised of and comment on MAP's work. Additionally, MAP received useful and important feedback and direction. This final report reflects the cumulative efforts of MAP's data gathering and analysis.



## **Appendix B**

### **Description of the Nevada Plan**



## The Nevada Plan

The Nevada Plan is the state's system of allocating resources to districts. It serves as a revenue guarantee program which provides a specified per-student amount (Basic Support per Student) for each district. The most notable feature of the Nevada Plan is the high degree of wealth-based equalization. Except in Eureka County, wealth-based per-pupil revenue disparities are minimal. The revenue-per-student differences, which are not insignificant, are based on adjustments to the formula for small size, special education programs, differences in transportation costs, and other similar categories. While its equalization provisions are disarmingly simple, the calculations necessary to determine the Basic Support Rate per Student are numbingly complicated. A review of the basic components follows:

**Weighted Enrollment.** The enrollment count is taken on the last day of the first school month of a school year. Kindergarten and pre-five-year-old special education students receive a weighted enrollment of 0.6.

**Basic Support Rate per Pupil.** In determining the Basic Support Rate per Pupil, the Legislature first determines the total amount of money available for K—12 education and divides it by the expected enrollment (estimates for both sets of numbers are provided by the State Department of Education, legislative staff and the Governor's office). This **Average Basic Support Rate** is then used as the centerpiece for the various adjustments which occur in the establishment of a **State Guaranteed Basic per Student Support Rate for each District**. These numbers are then memorialized in Nevada statute.

Four steps are required to determine the **State Guaranteed Basic per Student Support Rate for each district**. Each is described below.

### 1. Equalized Basic Support Ratio

The purpose of this factor is to gradually influence expenditure patterns among districts over time. The state uses three subcategories of adjustments to accomplish this:

- (a) teacher allotment tables (one for elementary and one for high school based on sizes of the attendance areas),
- (b) other staff allotment tables (formula is based on four groupings which cluster districts by attendance dispersion), and
- (c) estimated operating cost tables (same clusters as in (b) above).

Districts every year collect data which might lead to the adjustment of these formulas. The Nevada State Department of Education prefers to use



established data (from 1989-90). Although the formulas are based on specified allotments, they do not restrict district expenditure patterns.

## **2. Wealth Adjustment Factor**

The second step takes into account and equalizes the impact of the non-Nevada Plan local taxes. Non-Nevada Plan local taxes are composed of the yield from a 50 cent ad-valorem property tax in each county, motor vehicle privilege tax, some federal revenue, and other miscellaneous revenues. The result of this calculation produces a per student dollar amount which is either added to or subtracted from the state guaranteed basic per student support rate per district. In this way, the yield from local taxes is taken into account in the determination of an equalization factor which reduces revenue-per-pupil disparity between districts.

## **3. Transportation Factor**

The third step is to add (1) a district's prior year's operating cost for transportation per pupil and (2) the average of the capital outlay transportation costs per pupil for the last two years multiplied by .85. This number, divided by enrollment, yields a transportation adjustment.

## **4. Basic Support Dollar Amount**

The final step is to apply the ratios and factors and arrive at the state guaranteed basic per student support for each student.

A combination of state and local funds guarantees this amount per pupil. If local revenues exceed estimates, the state provides less than it originally estimated, and vice-versa. In addition, there is a hold harmless provision: if the current year enrollment is less than the prior year, the district is guaranteed the prior year funding level. There is also some adjustment in state dollars possible within the year if enrollment increases 3 percent or more after the first of the year.

## **Special Education Guarantee**

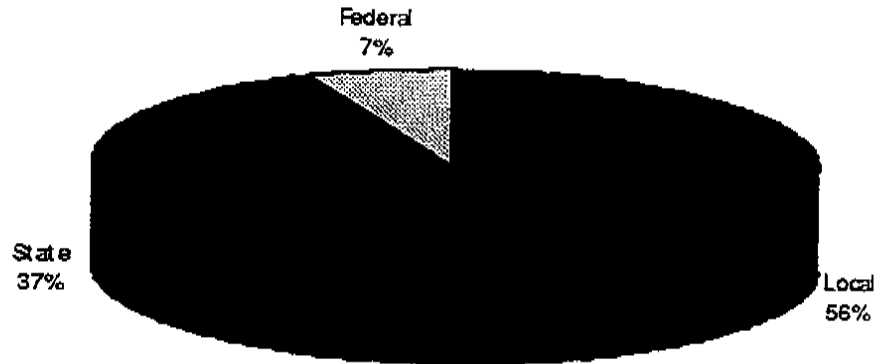
The Special Education Guarantee is calculated separately from the Basic Support Dollar Amount and involves the determination of the numbers of units of special education support times a per unit rate. Once this amount is determined, it is added to the Basic Support Dollar Amount, prior to the determination of the State Share (i.e., local revenues contribute to the special education guarantee). School officials in Nevada, as elsewhere, argue that special education expenditures significantly encroach on the general program.

## **Local Support**

Nevada's schools are highly dependent on revenues generated locally, as displayed in Figure 8.

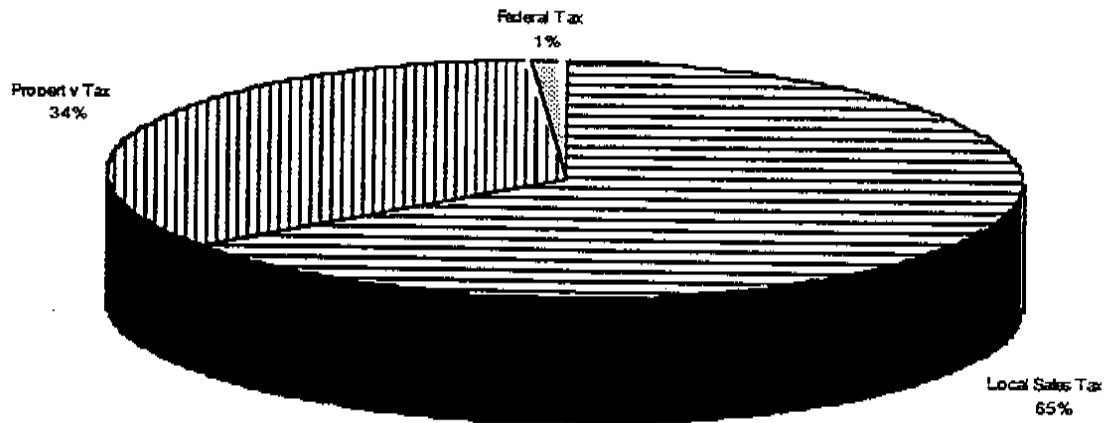
Figure 8

Federal, State, Local Share



Well over half the total funds are generated by local sources, particularly sales and property tax. There are essentially two categories of local support. The first enters directly into the calculation of the basic support guarantee of the Nevada Plan. It consists of revenues from a 2.25 cent local school support tax (sales tax) plus the yield of a 25 cent ad valorem property and mining tax. The second category of local support is the yield from a 50 cent ad valorem property and mining tax. The dollars generated from this 50 cent levy are not considered as part of the guarantee, but are taken into consideration when determining a district's wealth adjustment factor.

Figure 9  
Local Revenue by Source



It is important to note the relative importance of the sales tax in determining a district's local revenue.

#### State Aid

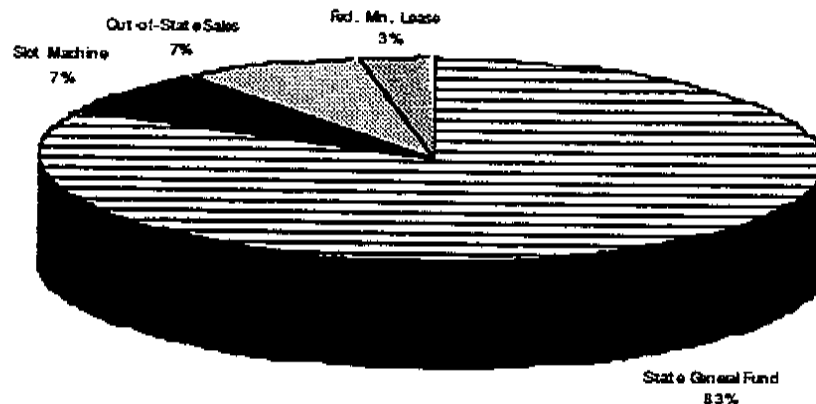
The amount of state aid received by each district is determined by the following formula:

$$\begin{array}{r}
 \text{Total Guaranteed Amount of Basic Support (state and local)} \\
 \quad - 2.25 \text{ cent Local School Support (sales) Tax (local share)} \\
 \quad - \underline{25 \text{ cents Property and Mining Tax (local share)}} \\
 \qquad \qquad \qquad \text{State Share}
 \end{array}$$

State funds distributed under this formula come from the Distributive School Account, which is comprised of revenues from five sources:

1. General Fund Appropriation
2. Slot Machine Tax
3. Mineral Land Lease Revenue
4. Interest from Permanent School Fund
5. Out-of State Local School Support Tax (2.25 cents)

Figure 10  
Sources of State Distributive School Accounts



### Special Revenue

Nevada uses the designation of Special Revenue funds to take into account the various programs frequently called categorical aid programs, i.e., programs for special clients or purposes.

These fund titles include:

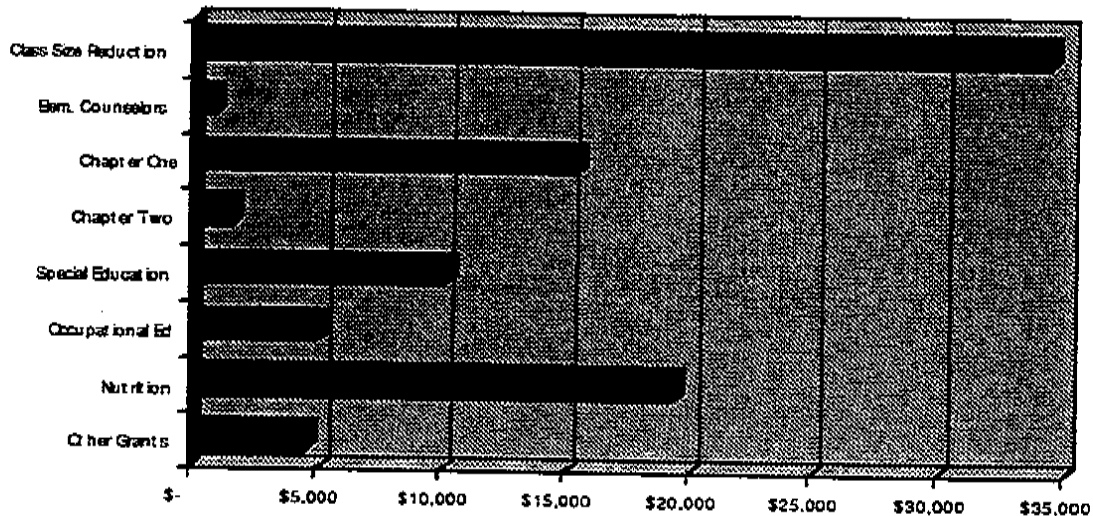
#### *Federal*

- Chapter One of the Elementary and Secondary Education Act
- Chapter Two of the Elementary and Secondary Education Act
- Occupational Education-Perkins Act money
- Nutrition-school lunch money
- Other

#### *State*

- Class Size Reduction
- Elementary Counselors Program
- Other School Improvement Programs (modest sums)

**Figure 11**  
**Special Revenue Funds**  
**(thousands)**



**Adult Diploma**

Adult diploma courses are available in high schools throughout Nevada. District programs are funded through the Nevada Plan for the Adult High School Diploma Program. Funding levels are established by the Legislature.

**Capital Construction**

Funding for school construction is the responsibility of individual school districts. No state aid is available for new construction or for rehabilitation of existing facilities. These projects can be funded in the following ways.

***General Obligation Bonds***

Almost all capital construction is funded by G.O. (General Obligation) Bonds which require voter approval. Total bonded indebtedness of a county school district cannot exceed 15 percent of the total assessed value and must be approved by majority vote.

***"Pay-as-you-go"***

"Pay-as-you-go" is another alternative, rarely utilized. (Only four districts, Elko, Humboldt, Lander and White Pine currently employ this mechanism). "Pay-as-you-go" is limited to 75 cents per \$100 of assessed value for districts with fewer than 25,000 students and 50 cents per \$100 of assessed value for districts of more than 25,000 students.

Districts are permitted to accumulate funds for renovation, replacement of capital assets, etc. A majority of voters must approve "pay-as-you-go" if it is to be used for new construction.

#### *Fee on Residential Construction*

Finally, small districts, those with enrollments lower than 35,000, with the approval of county commissioners, can impose a tax of up to \$1,000 per residence.

## Concluding Comments

The Nevada Plan has one of the strongest equalization components of any school finance system in the nation. The formula guarantees almost no money for Eureka, the highest-wealth district, and almost total operating revenue for Lincoln, the lowest-wealth district. Only tiny Eureka County falls outside the statute's equalization provisions and is permitted to spend far beyond the capacity of other districts. To address the Eureka problem would require a "recapture" provision, which would permit the state to move local tax receipts across county boundaries. An additional option would be to combine Eureka and its bountiful local resources with another county. Elko, where many of the workers in the Eureka mines reside, is an oft mentioned candidate for such a merger.

Another notable feature of school finance in Nevada is the relative heavy reliance on the sales tax. The state's general sales tax represents about one-third of the state's general fund contribution to the Distributive School Account. In addition, approximately two-thirds of local revenues are generated from sales tax receipts. Combined, the sales tax is by far the largest single source of school revenue, producing well over 40 percent of the total. The next largest source of revenue is the property tax at less than half that amount.

This situation will not cause Nevada problems when the economy is performing well and the state's coffers are filling up. However, when the economy does not perform well, schools face a double negative reaction. When sales tax revenues are down, the local contribution is down as well. When the local contribution is down, the state is supposed to step in and provide the difference, up to the Nevada Plan guaranteed amount. However, since the state, too, is heavily dependent on the sales tax, its contributions are more difficult to raise during economic downturns. The predictable result is a reduction in the amount of the State guarantee, thus yielding less money to schools.

In terms of the relationship of school finance to the issue of school district organization, Nevada's emphasis on equalization means that, generally, the

formula will adjust revenues in such a way as to maintain the equalization features for most reorganization proposals. However, in a few instances, the proposed reorganization could create Eureka-like equalization problems. This outcome would raise at least three issues.

First, more students would be attending schools in which the formula is not wealth equalized. Second, the proposed new district would no longer be contributing to the funding of the remaining components of the existing district. This would create a shortfall in the guarantee, which would have to be filled by additional state dollars. Third, if the state is unable to raise sufficient revenues to meet the guarantee, other school districts throughout the state would "contribute" to the solution by having their state revenues reduced.

## Appendix C

### **Information Resources and Telecommunication Technologies in Education**





## **Information Resources and Telecommunication Technologies in Education**

The efficient and effective deployment and utilization of technology in education is a current challenge of most states and school districts. For Nevada, this challenge is more compelling due to the vast expanses of rural territory and the relatively large numbers of small, isolated schools.

MAP, in order to inform its discussion of districting options, commissioned the paper that follows. The paper is designed to acquaint policy-makers and others with technology opportunities generally and Nevada applications and resources specifically.

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**Information Resources  
and  
Telecommunication Technologies  
in  
Education**

**A Discussion Paper for the  
Nevada Study of School District Reorganization**

**Frank L Wallace  
Sacramento, California**

**May 1996**

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## Introduction

In Nevada, a few urban schools already have made a substantial commitment to integrate technology into their curriculum, but many schools are still in their infancy with regard to the acquisition of technology hardware and software. Particularly in isolated rural areas of the state, in communities with limited telephone or cable services, few if any schools have had the resources needed to acquire information technologies. Their isolation will require unique solutions with regard to telecommunications connectivity and ongoing support services. During preliminary district and school visitations, MAP team members were surprised at the dearth of technology in use in the rural schools. Its application in small, isolated schools holds out great promise for a cost-effective way of compensating for the inherent disadvantages of small size and isolation from educational and economic resources. With appropriate technology, students in Jackpot will have instantaneous access to the Library of Congress, students at Lund High School can take advanced physics, and teachers in Caliente can take graduate-level courses without leaving home for the summer.

MAP commissioned this paper to provide a general overview of information technologies and the contributions they can make in improving education, in all kinds of settings and for all levels of students. Nevertheless, the issues surrounding equity of access for rural schools in Nevada deserves special attention as the State deploys network systems and promotes the use of various kinds of technology in the months ahead.

Throughout this report, another theme will be evident. A far greater return on investment will be realized if the deployment of technology in rural, as well as urban, schools is undertaken in partnership with the surrounding community. This concept of community extends to include state government, the business sector, and all levels of the education system. In particular, the University and Community College System of Nevada, through the use of telecommunications technology using NevadaNet, has an exceptional opportunity to extend its services and networking capacity to every school in Nevada. Efforts to install state-of-the-art technology in rural communities will pay handsome dividends in improved education, enhanced productivity, and preserved community cohesiveness.

## Information Technology in America

Digital technology is an essential feature of life in America.

In our daily lives, when we buy gas or use a credit card, the clerk enters the transaction into a high speed telecommunications network for approval and processing. When we deposit or withdraw cash at virtually any bank using an ATM card, a transaction involving telecommunications networks checks our bank balance and posts the change almost instantaneously. When a grocery checker uses a bar code scanner to determine the price of a box of cereal and provide you with a receipt, this device also automatically records the sale and makes an inventory update in the market database. When we use a library today, we typically initiate a computer catalog search, a rapid way to find a book or magazine on a selected topic which also indicates if that resource is available for checkout. Telephones, televisions, automobiles, newspapers, grocery stores, traffic signals, postal services—in our daily lives we are dependent on products and services that utilize various kinds of electronic information systems, often without us even noticing.

Similarly, our businesses, our industries, our farms, our transportation systems, our hospitals, our military services, our government, and increasingly our schools, are also using technology as tools to manage, to communicate, to transact business, to produce and market goods, and to educate. There is almost no aspect of our economy and our society that isn't being transformed by electronic technology.

Perhaps the most impressive of these transformations is the development of telecommunications technologies. Simply put, through the development of digital information technologies, the telephone, television, and computer are merging into a multimedia communications system commonly called the "information superhighway." This superhighway, actually a vast network of networks including the Internet, has the capability to deliver full-motion video, voice communication, and data of all kinds at increasingly high speeds both to urban and rural regions throughout America and rapidly throughout the world.

These emerging technologies give us access to information from hundreds of thousands of databases and information locations; they make it possible to learn about world events often as they are happening—no matter how far away; they allow us to shop from home—to order fruit grown in Central America, watches delivered from Hong Kong, or clothes made in India. They enable us to observe distant planets or visit the South Pole along with scientists. They make it possible to communicate in seconds to virtually any part of the globe and beyond. They encourage us to share

ideas and discuss issues with groups and individuals about every imaginable subject at any time of day. The potential uses and value of interactive electronic information services are truly incredible and yet are still in their infancy in terms of their impact on our lives.

Electronic technology in general, and telecommunications technology in particular, will expand its impact and its usefulness in America and around the world for the foreseeable future. Already, information is big business. An estimated 60% of all jobs in the year 2000 will require a working knowledge of some kind of information technology, according to Kickstart, a major report presented in February 1996 to the President by the U.S. Advisory Council on the National Information Infrastructure. Is it any wonder that the many studies calling for economic and educational reform concentrate on information? Are we surprised when headlines indicate an abundance of jobs and high salaries for computer engineers and other technically trained graduates—at both the college and high school level?

#### • The Changing Workplace

The rapidly changing world of computers and information technology applications are having a profound impact both on how workers work and on how work is organized. Expectations regarding what front line workers are expected to do is changing and these expectations are spreading from sophisticated conglomerate Fortune 500 businesses to smaller manufacturing companies, to supermarkets, to utilities, to hospitals, and even to family stores. Clearly, employers' expectations of employees will be different as the use of information technology permeates these organizations.

It is also apparent that most business leaders now expect high school and college graduates to have new skills.

The Commission on the Skills of the American Workforce has presented a number of issues related to how our economic enterprises are organized:

"The organization of America's workplaces today is largely modeled after the system of mass manufacture pioneered during the early 1900's....The system is managed by a small group of educated planners and supervisors who do the thinking for the organization....Most employees under this model need not be educated. It is far more important that they be reliable, steady and willing to follow directions.

But in the world's best companies, new high performance work organizations are replacing this 'Taylor' method. These companies are using a new approach to unleash major advances in productivity, quality, variety and

speed of new product introductions....The new high performance forms of work organization operate very differently. Rather than increasing bureaucracy, they reduce it by giving front-line workers more responsibility. Workers are asked to use judgment and make decisions....Work organizations like these require large investments in training. Workers' pay levels often rise to reflect their greater qualifications and responsibilities. (America's Choice, pp. 2-3)

- **Expectations for Schools**

In a similar fashion, the Secretary's Commission on Achieving Necessary Skills (SCANS) issued two important reports in the early 1990's which relate the economic challenges being faced in America with challenges which also need to be addressed by our education system. In What Work Requires of Schools, the SCANS Commission recognized that teachers need to be sensitive to the changing conditions in the workplace. Their methods of teaching and their organization of the curriculum need to prepare students for a different working environment. Sitting in rows of desks listening to teachers lecture should no longer be the primary culture of the classroom. Textbooks alone cannot provide the scope of information resources and the curriculum structure to prepare students for a work environment that is dependent on information age characteristics:

The message to us was universal: good jobs will increasingly depend on people who can put knowledge to work. What we found was disturbing: more than half our young people leave school without the knowledge or foundation required to find and hold a good job. These people will pay a very high price. They face the bleak prospects of dead-end work interrupted only by periods of unemployment....This report identifies five competencies and a three-part foundation of skills and personal qualities that lie at the heart of job-performance. These eight requirements are essential preparation for all students, both those going directly to work and those planning further education. (See Attachment A for a listing of these requirements.) (SCANS, 1991, p. xv.)

- **Skills and Attitudes of Educators**

Many of Nevada's teachers began their careers 20 to 30 years ago when expectations for teaching and academic standards for students were significantly different. These long term professionals, along with beginning teachers today, should have the opportunity to develop new skills and techniques, not in seminars conducted once a year but on a sustained regular basis each year. They need to be comfortable in using information resources delivered via telecommunications technology for their own professional development as well as to access the resources essential to building a dynamic curriculum in collaboration with their students.

Throughout the United States, teacher education programs and continuing staff development services should promote educational change, not stifle it through the use of traditional methods and materials. As drawn from the proceedings of a conference of teacher fellows attending an influential Christa McAuliffe Institute, the need to restructure these systems of professional development for teachers represents a major challenge for policy makers:

In some ways, the reform movement has inched forward almost as far as it can under existing conditions. Now, those who work in schools must acquire the new attitudes, skills, and knowledge essential to implementing and sustaining deep, systemic change. The professional development of educators may, in fact, be the next educational frontier to be conquered. Teachers have to start thinking of themselves as learners, just like their students."(Changing Teaching: The Next Frontier, 1993, p.5)

Charles Binderup, former superintendent in Tulelake Basin Joint Unified, a remote rural school district in northern California, was a pioneer in using distance learning technologies to enhance resources for rural high school students. He provides a frank assessment of how a restructured curriculum will impact teachers and their significantly different relationship to students in information-rich schools:

Dr. Bill Cook of the Cambridge Management Group, widely respected in the area of strategic planning, causes teachers a great deal of discomfort when he describes the changes necessary in the classrooms of America. According to Cook, it is no longer sufficient for teachers to teach what they know. It is imperative that teachers be expected to teach more than they know and to become true "brokers of information" in their classrooms. This is most unnerving for instructors who are accustomed to the "chalk and talk" routine which characterizes most traditional approaches to classroom teaching. A fundamental precept of restructuring must be the realization that the teacher cannot possibly have all the answers. This will require some time to accomplish and will probably cause some teachers to leave the profession when textbooks, at long last, become supplementary and technology begins to achieve its promise. (Binderup, 1991, pp. 20-21)

#### • Curriculum Modifications and Student Performance Standards

The availability of information technology in our workplaces and in our schools will result in fundamental changes in the way students learn. With regard to expectations for teachers and students in the most critical subject area in school today, namely English proficiency, the executive director of the National Council of Teachers of English, Miles Myers, presents his views of the new "Standards for English Language Arts" that are part of the growing nationwide discussion of content and performance standards in all subject areas:



What is the new literacy of basics-plus in English? Here are some of its features, contrasted with the features of the old literacy (see Chapter 3 of the standards):

- A combination of collaborative and individual work, not just individual work.
- The use of many forms of technology (computers, videodiscs), not just paper and pencil.
- An emphasis on interpretation, criticism, and knowing and using basic information, not just remembering and repeating.
- A critical understanding of print materials and of film, TV, and other nonprint media, not just memorization of information in print materials alone.
- An emphasis on inquiry and the use of many different sources of information, not just fill-in-the-blank answers to questions using the district textbook.
- The reading of several works of literature as representations of interactions across traditional and contemporary experiences, not just reading of one work at a time as a universal experience.
- An emphasis on writing as both communication skills and an activity for thinking, not just as a set of isolated mechanical skills. (Myers, 1996, p. 16)

These characteristics of a changing school culture are applicable across the curriculum.

To summarize, the basic principles of educational reform documents highlight the need to establish policies and programs designed to provide students with the skills needed in our rapidly changing world of work, and thereby to contribute to a prosperous information-based economy. Such policies should in turn reinforce those which guide an educational system committed to high expectations for student learning and to support competent teachers who are willing to adopt new techniques and use new resources in partnership with their students.

Increasingly in our economy and our schools, information technology will be an essential, not a supplemental, tool.

## Developing a National Information Infrastructure (NII) - Including Services for Rural America

The federal government recognizes that the development of a comprehensive information system is one of America's critical needs. A recent report, prepared for the U.S. Department of Commerce, highlights the needs of rural communities, while still being relevant for urban areas:

It is a top priority of the Clinton Administration to develop an advanced National Information Infrastructure (NII) that will deliver to all Americans the information they need when they want it and where they want it, at an affordable price. Extending the NII into inner cities and rural areas is of particular concern to the Administration....The Rural Information Infrastructure (RII) is the part of the NII that will reach into America's rural areas, providing access to a broad range of information and information services. (Survey of Rural Information Infrastructure Technologies, 1995, p. vii)

This commitment is particularly important in a state like Nevada. The historically unequal access to information and cultural resources between urban and rural schools is no longer justifiable. Urban schools, even with all their problems already enjoy far greater access to information, culture and technology. However, technology can be a great equalizer and for that reason it seems appropriate to assign a higher priority and relatively greater resources to providing access to technology to rural schools.

This point of view, particularly regarding the current lack of information services in rural communities, is highlighted in same report:

The economic, educational, and social needs of rural America are complex, diverse, and dynamic. Rural communities are trying to cope with intense global competition for agricultural markets, a declining industrial base, an aging population, and the need for better schools, health care, and human services. These problems are aggravated by the fact that rural America is information poor. Using almost any scale of measurement - radio and television market access, numbers and sizes of libraries, newspapers, bookstores, schools - rural counties trail urban and suburban areas in delivery of information goods and services. This information poverty threatens to further decline in the precarious economic health of rural America. In a transformed world economy, driven by information exchange, isolation becomes irrelevant. (Survey of Rural Information Infrastructure Technologies, 1995, p. 1-1)

## **Developing a Nevada Information Infrastructure— A Partnership with Rural Communities and its Schools**

For Nevada to effectively compete in the world economy, all schools throughout the state should have access to information technologies, and educators have to develop an appropriate vision for preparing their students for a world of work that is dependent on the use of information. However, this can not happen in a vacuum and has to be part of a broader statewide strategy to develop information-rich communities, as well.

Business and industry, higher education, health care services, government, along with homes and schools, should have access to a comprehensive "Nevada Information Infrastructure." A state initiative that excludes one or more such segments as part of Nevada's overall information networking development will not have nearly the impact as one which recognizes the needs of all segments. Indeed, in rural areas, the needs of the schools and the needs of the community have always been inseparably linked. In this emerging worldwide economy, equitable access to information by all members of the community is essential.

It is beyond the scope of this paper to propose specific features of the equipment and networking systems that need to be deployed to form a state information infrastructure. This paper does include a short overview of telecommunications technologies and examples of telecommunications applications to order to illustrate the rich array of resources that are already being used in many schools in America and in a rapidly increasing number of schools in Nevada. As is described below, the proposed expansion of the NevadaNet to install Internet connectivity for all Nevada's public schools by the end of 1996 represents a major step in building the education components of the infrastructure.

### **• Telecommunications Services and Information Applications**

The telecommunication services listed below represent major types of information exchange capabilities that will become available as the NII, state, and community networks evolve. These services include:

- Two-way voice
- Multiple-way voice teleconferencing
- Multiple-channel audio programming
- Low-speed computer networking
- Medium-speed computer networking
- High-speed computer networking
- Very high-speed computer networking
- Video conferencing—compressed
- Video conferencing—broadcast quality
- Multiple-channel video programming
- Video on demand
- Interactive video

(Survey of Rural Information Infrastructure Technologies, 1995, p. 7)

Telephone companies and cable TV companies are currently the primary providers of telecommunications services, often in partnership with state and county governments and university systems in several rural states. It is expected that this will continue to be the case as the Rural Information Infrastructure develops and connects communities throughout the country. A combination of wireline systems (including the Public Switched Telephone Network (PSTN), cable television, and computer communication networks), and wireless systems (such as radio, terrestrial broadcasting, microwave point to multi-point services, wireless telephone, packet radio, wireless local area networks, and satellite systems) will likely be used to deliver most of the services noted above. It is likely that new technology will be developed in the near future which will have the capacity to economically deliver advanced networking and video services to even the most remote areas of the state.

#### • Telecommunications Applications

Telecommunications services can be used in a variety of way to enhance information access and delivery of information resources, whether in urban or rural areas. Can such resources really be used on a daily basis to enhance the school curriculum? Nancy Davis, a contributor to the world wide web resources of the Advanced Technologies Academy in Las Vegas, has provided an excellent set of reasons why teachers should use the Internet:

##### Using the Internet in Education

- > To expand upon concepts taught in class.
- > As an alternate method of teaching concepts normally taught by text or other resource.
- > To enhance students' information and encourage reading by accessing periodic student interest.
- > to provide students with additional information related to concepts taught in class.
- > To develop cross-curricular activities using Internet sites and information.
- > To improve writing and critical thinking skills.
- > To stimulate curiosity.
- > To learn to research as well as become familiar with the type and amount of information available in any one area.
- > To learn how to evaluate researched data for its usefulness, affectiveness (sic) and appropriateness. (Davis, Advanced Technologies Academy www, 1996)

Specific applications to undertake these activities include electronic mail, remote access to data bases, LAN interconnection, access to electronic business exchanges, and even participation in electronic government (such as sending letters to members of Congress, both of whom have world wide web connections, and to the White House). No doubt there

will be a wide variety of applications as the capacity of technology improves and bandwidth increases. All of these applications will be relevant for teachers to use in creative ways to enhance the school curriculum.

In another mode of telecommunications, as the NevadaNet system deploys compressed video services to more locations, in addition to locally installed satellite downlink facilities and low cost DBS equipment, students and teachers will be able to participate in a variety of video-based services as well. The most common application of compressed video and direct satellite services is the provision of advanced courses for rural high school students (especially in the areas of science and foreign languages) to school where qualified teachers are not available. In areas where teachers have limited access to qualified experts or appropriate staff development, universities and other providers offer high quality staff development programs and team teaching at a distance (such as the federally-funded TEAMS science and math classes produced by the Los Angeles County Office of Education which are distributed to several districts across the country).

## Telecommunications Initiatives in Nevada

In Nevada, several initiatives are already underway that can provide important support for further network development and effective utilization of information resources by teachers. The following examples of telecommunications services were drawn almost entirely from an exploration of World Wide Web (www) sites currently serving Nevada constituencies (see the WWW References section for specific www addresses). These represent only a partial inventory of existing Internet information resources in Nevada. New resources will likely be added rapidly once the Nevada School Network has connected schools throughout the state.

### **NevadaNet**

The following descriptions were taken from NevadaNet www sections as noted.

"NevadaNet was founded [in 1988] by the University and Community College System of Nevada [UCCSN] with support from the National Science Foundation to provide a high speed data communications infrastructure for higher education within the State of Nevada. NevadaNet currently maintains a statewide digital network supporting data, video, and voice applications.

The network has a hub-and-spoke architecture, with current hubs located at the two regional data centers in Reno and Las Vegas. Within the State of Nevada, NevadaNet supports the following data protocols: TCP/IP, SNA, IPX, and Appletalk. Outside of Nevada, only TCP/IP is supported. Services provided on the network within the State include data, point-to-point video, switched multi-point video, and voice. Outside of the state, NevadaNet provides members with connections via the NSFNET and Internet to the global Information Superhighway.

While higher education research and educational support are the primary missions of NevadaNet, we have an additional charge from our partner, the National Science Foundation, to broaden the base of connectivity to the K—12 education, public library, and public sector communities within Nevada.

Within the scope of NevadaNet's overall mission are included the goals of facilitating and disseminating knowledge, encouraging collaborative projects and resources sharing, aiding technology transfer to Nevada businesses, fostering innovation and competitiveness within Nevada, and building broader infrastructure in support of research and education." (NevadaNet - Policies, 1996)

"NevadaNet 1997: NevadaNet will provide internetwork services for over 40 UCCSN sites in all the major communities in Nevada. More than 30 of these UCCSN sites would have interactive compressed video capability. We expect to continue to serve our five current affiliates as well as other communities who evolve their digital network capacity." (NevadaNet - Its history and plans, 1996)

"NevadaNet Expansion Plans: NevadaNet, under the auspices of a new Nevada Legislative initiative (SB 204), is currently developing plans to expand its infrastructure to serve all K-12 schools in Nevada. Such expansion will likely include some prudent combination of direct connections and dialup connections." (NevadaNet - Frequently Asked Questions, 1996)

A NevadaNet connectivity map, illustrating its many "points of presence," taken from the NevadaNet web site, is included in Attachment B. A version more suitable for print distribution likely can be made available by contacting the NevadaNet director, Dr. Maurice Mitchell.

## **UCCSN**

The Universities and Community Colleges System of Nevada (UCCSN) encompasses 7 different institutions, all of which have active world wide web sites. The Desert Research Institute provides information for each of its 5 research centers. Connectivity between the UCCSN campuses is provided through NevadaNet, described above.

## **Specialized UNLV Centers**

Connected with UNLV, the National Supercomputing Center for Energy and the Environment was established in July 1990 and is a full-service supercomputer facility. UNLV also hosts the Henry Reid Center for Environmental Studies which maintains extensive web resources.

## **Great Basin College**

The Great Basin College, along with the other Nevada community colleges, has established web information resources for both its Elko and Ely campuses. As part of its www home page, the college indicates that it has initiated a distance learning program which includes self-paced courses, video tape programs, computer assisted materials and online conferencing. Courses are to be provided via interactive compressed video (LAVC) between Elko, Ely, and Winnemucca. This type of video service could easily be used to promote K—12 teacher exchanges of ideas and promising school practices, provide remote staff development with college credits, and allow cross-age/peer tutoring at a distance.

## **University and Public Libraries**

The Nevada Education Online Network (NEON) offers inter-library information for libraries in the state. This online system uses older GINA client-host software in a telnet text-only capacity at the current time. Both the Washoe County and Clark County Public Libraries maintain www sites. The Bolder City Library has recently come online. The Clark County site also has initiated a section which links its site to other web sites maintained by UCCSN, schools, public agencies, broadcast media, and other sites in Nevada. As schools throughout Nevada come online, this capacity to easily link sites to each other can be a very valuable service.

## **The Nevada School Network**

With the approval of SB 204 in 1995, the Legislature authorized the allocation of substantial funding to the University and Community College System and to the State Department of Education to develop the Nevada School Network (NSN). As indicated in the legislation and by a State Department of Education official, the first goal of the NSN is to have every school in Nevada connected to the Internet by the end of 1996. Funds are also available for districts to purchase network equipment for deployment in schools. The University of Nevada Reno currently serves as the host file server site for the NSN (See NevadaNet above).

The NSN web site also is encouraging schools with Internet access to develop their own web services and information resources appropriate for their own communities. The home page concludes: "Try it. Get your students involved. Watch their eyes light up when they see something they have created displayed before the entire world. What they do matters!"

## **World Wide Web Sites Implemented by Public Schools**

At least three elementary schools and six secondary schools have already initiated www services for their students and communities. Hunter Lake Elementary School in Reno received an \$85,000 grant award from Nevada Bell to acquire technology equipment and to establish Internet access through UNR. Galena High in Reno, and Durango High, El Dorado High, Silverado High, Grant Sawyer Middle School, J.E. Manch Elementary, James I. Gibson Elementary (in Henderson), The Las Vegas Academy of the Performing Arts, and the Math/Science Institute, all located in the Clark County School District, have established web sites. The Advanced Technologies Academy, also in Las Vegas, has a very extensive www site which has been in existence since November 1994.

To not lose site of the equity issue, as was noted in the Introduction, it appears that no schools in rural areas of Nevada have developed www resources, quite possibly because none have yet been able to install the necessary equipment or obtain basic connectivity services of an "Internet Service Provider."

With these web pages in place, parents and community members with Internet access can review any information posted and can access their students' work at any time. They can also leave messages for school staff who will then be able to respond in a very efficient manner.



## **Federal Government WWW Services**

There are a growing number of federal government projects that have established web services specifically for Nevada, some of which have resources targeted for K-12 students. The Yucca Mountain Project is maintained by the U.S. Department of Energy (USDOE). The web page provides information about on-site tours for K-12 schools. The USDOE also supports the Nevada Test Site web resource, including descriptions of outdoor laboratories and technical assistance. The U.S. Geological Service has established a web site describing its services in Nevada.

## **Community Networks**

There are a variety of commercial Internet resources that have been developed for constituencies in Las Vegas and Reno. The Clark County Library lists some of these and any web search engine, such as Lycos or Alta Vista, will provide a substantial list of many others.

A few rural communities have begun using the Internet as well. The community of Elko has developed an Internet service and its schools could easily start school web pages in the near future. Wells and Wendover have a web page supported by the Wells Rural Electric Company which apparently intends to develop its services as a "freenet" to the communities it serves. Utah Valley Online (UVOL) provides limited descriptions of White Pine, Lincoln, and Eureka counties but it is not clear that there are any Internet services available in these areas at this time. The Inter-Tribal Council of Nevada with headquarters in Sparks maintains a web page for its constituencies in Northern Nevada.

## **Distance Learning Resources**

Distance learning satellite technology has also been deployed in Nevada schools. While data was not available via the Internet, it appears that except for schools in Churchill, Lander, and Mineral counties, there are satellite downlink dishes installed in schools in every other county, with the majority being in more populated areas of the state. A "Far View Nevada" map, produced for KNPB-Channel 5, indicates that thirteen additional dishes are scheduled to be installed in Clark County by the end of 1996. In some communities, these downlink sites apparently are operated by AgNet. With this technology, students and teachers have the capability to participate in a variety of advanced college-preparatory courses, such as advanced science and foreign languages, and numerous staff development programs, many of which are supported by the national "Star Schools" program.

These resources represent an important pool of resources already available in Nevada. The Nevada School Network, in particular, will be an extremely important initiative to reduce the isolation of rural schools and to address the issue of rural information poverty. It should be noted that "dial up" access will offer only low speed connectivity and this will hamper extended use of multi-media applications which require substantially higher speed connections to be of real value to an entire school community. Wireless technology may allow the needed speed and bandwidth capacity in the future at a reasonable cost.

At the same time, having telecommunications connectivity available does not mean that the potential value of the Internet will automatically be utilized or that it will be used well if teachers are unprepared. Each district will need to make its own commitment to utilize this new capacity by committing ongoing resources for staff development and for staff needed to create and maintain information resources of value to various constituencies inside and outside the educational community.

### **Technology Tools and Information Resources— Applications in Schools and Districts**

There is a substantial body of literature which documents many innovative uses of technologies already being implemented by creative teachers. A selection of some of these reports is included in the References section and each of these provide eloquent testimony that technology can be an effective tool within the context of carefully planned school reform programs. Within the limited scope of this paper, it seems appropriate to provide a few highlights of how technology resources are being used in exciting ways, particularly as examples for districts and schools in Nevada to emulate.

The two abridged school case studies, a district planning report, and a university/rural school partnership offer four examples of how teachers and administrators have begun to integrate technology into classrooms across the country. One of the case studies is taken from "Tales from the Electronic Frontier," a excellent compilation of case studies, combined with descriptions of Internet education projects, prepared by the WestEd Eisenhower Regional Consortium (WERC). Some of these models include extensive investments of time and resources; while others are operating with very limited funding and perhaps 6-8 year old equipment and yet are still finding creative ways to revitalize their curriculum and offer critical information skills to students.

- **Clear View Elementary School, Chula Vista, California.**  
**Ginger Hovenic, Principal**

At Clear View Elementary School, Juan and Leticia are busy at their laptop computer, taking notes as other fifth-grade students report on the details of the Revolutionary War. In a sixth-grade classroom, Joshua and Lioness are talking via the superhighway to Frank Stites, a history professor at San Diego State University and an expert on Supreme Court Justice John Marshall's appointment to the Supreme Court, which they will include in the book the class is writing about him. In another classroom, students are sharing information with a group of students from Finland. They ponder how close each group is to the equator and the difference it makes in climate, environment and leisure activities.

Activities in each classroom are unique, as students go about the business of learning and using technology as a tool to communicate with others, share knowledge, write and edit their work, design exciting and professional-looking work that exhibits their creativity, and store their work in electronic portfolios. Because of the integration of technology into the curriculum, students are no longer limited by their teacher's knowledge or by the four walls of the classroom....All 520 students in this culturally and linguistically diverse school use computers as part of their daily routine, employing a wide selection of math, writing, reading and science software programs to produce student-generated projects. As a result, students are performing at a higher level and standardized tests are reaching the upper quartile. (Hovenic, 1994)

- **Carminati Elementary School, Tempe, Arizona**  
**Susan Hixson, Staff Development Coordinator**

It was a gorgeous spring day and Mrs. Chan and Mrs. Smith's third graders were on a field trip [to the Phoenix Desert Botanical Gardens]. Part of a six-week unit on the Sonoran Desert, the field trip was the culminating event of a series of interdisciplinary activities. Students had done library research and conducted experiments but nothing could compare to this - investigating a model desert environment.

Planning for the unit began in the fall. The two teachers wanted their students to develop inquiry and communication skills and to learn about plant and animal adaptation. What features are common to local plants and animals and how do these features help them to thrive? How do plants and animals interact and depend on one another for food and shelter? The teachers were also eager to explore instructional uses of their new classroom computer and Internet connection. As they were unfamiliar with the Internet, they invited me to help with the planning and teaching....Mrs. Chan and Mrs. Smith have constructed an unusual classroom environment. The two teachers share a double-sized room and group their students together. Each day Mrs. Smith's ten students with disabilities work side by side with Mrs. Chan's group of third graders. This rich, more inclusive learning environment has worked out well for students and parents alike and has given the two teachers countless opportunities to team teach and share resources....

As we talked about goals and lesson plans, I started to identify some of their key questions. How would using the Internet affect student learning and enthusiasm? How would it be different from using a textbook or CD-ROM? How might the needs of learners with differing abilities be addressed? The teachers were also concerned about the student to computer ratio: how could they accommodate all 37 students with only one classroom computer?...

Students took turns and did their online research during team study times. While one group used the computer, other groups focused on cacti in the room and did other tasks. After the first few teams completed their online work, Mrs. Chan suggested that we move the computer from behind her desk and into a bigger, more accessible space....The teachers had undergone a real change in thinking. At the beginning of the unit, they had questions about the usefulness of Internet tools and resources. Now they were allocating precious classroom space to foster student computer use. At some point, Mrs. Chan and Mrs. Smith had made their decision: the Internet was a valuable tool for student learning and needed to be available to students during this unit and future lessons....

So many good things came out of this project. Mrs. Chan and Mrs. Smith began exploring the Internet and discovering ways of using it in their teaching. Students gained access to information and people that had not been as accessible to them. How could any school afford books and CD's with the diversity and amount of information accessible on the Internet? And how could those materials facilitate the kind of student-to-student interaction third graders experienced through this project? (Hixson, (1996) In *Tales from the Electronic Frontier* )

- **New Haven Unified School District, Union City, California**  
**Roger Hoyer, Assistant Superintendent for Technology**

The introduction of classroom computers began in the New Haven Unified School District in the late 1970's. The evolution of computing in the classroom continued to grow through the early 1980's with each school experimenting with different and newer technologies.... Planning became essential for successful implementation of instructional, business and personnel technological solutions. Since adoption by the School Board in July 1986 of the first technology master plan for instruction, the district has moved to an integrated approach for planning and implementation which includes all aspects of the educational environment.

New Haven's *Strategic Plan for Integrated Technological Solutions* became a commitment to use modern technology to enhance and enrich learning opportunities for students, and to increase the effectiveness of teachers and support staff. Technological resources should be an integral part of all programs and departments in the school district. The district mission is to provide the direction necessary to ensure that technological resources are used in an integrated manner which results in improved student achievement and the efficient delivery of services. The district focuses its planning on the following principals.

Technological resources will be:

- used to enhance and enrich learning opportunities for students in all areas of the curriculum;
- used to increase the effectiveness of staff;
- be cost effective over time;

- used to prepare students for continuing education and for the world of work in the 21st century;
- viewed as tools necessary for learning and working in our modern society and not as ends in themselves;
- acquired based upon future trends in technology;
- used to ensure confidentiality of student and employee records.

New Haven is currently focusing their planning and implementation in seven areas: Networking; Hardware; Staff Development; Telephony; Video; Productivity; Software, Resources and Development; and Document Management. Each area seldom stands alone, and each area provides opportunities for integrating technological solutions within each department. (Hoyer, CUE NewsLetter, May/June 1996)

- **SMILE: Science and Math Investigative Learning Experiences, Oregon State University**  
Sue Borden, Assistant Director, SMILE Program

SMILE is an outreach program of Oregon State University in partnership with eight rural school districts and a large number of corporate, foundation, and agency sponsors. Twenty-four schools are involved: an elementary, middle, and high school in each district. Minority and disadvantaged students in grades 4-12 in these districts are eligible to apply for the program....The mission of the SMILE Program is to increase the number of underrepresented minority students who graduate from high school qualified to go on to higher education and pursue careers in science, math, engineering, and the health professions....We have learned a lot. My purpose today is to share some of that with you and then to discuss where we go from here. I chose the 7-Layer Model proposed by John Sechrest as a framework for discussion.

1. **Network:** Dial-up lines seemed most likely, at least to get going....Rarely are there phone lines in schoolrooms....
2. **Hardware:** We went with Macintosh. Apple helped us by donating computers -- often the first in their schools....
3. **Software:** Our main concern was that the software be user friendly....We were particularly concerned with what the teachers would use for e-mail....
4. **System Administration:** We have done it ourselves, with lots of help from our Computer Science Consultants. We have long distances to contend with, and we cannot just barge in any time that is convenient for us....Few districts have seen the need to hire such a person on a full-time basis. Most of our sites do not have local repair facilities or people who can offer good advice.
5. **User Support:** We rely heavily on our Computer Science consultants....We offer workshops for our teachers three times each year on the OSU campus. We travel at least once a year to each site, and we send our consultants out as often as we can to troubleshoot and present further training....
6. **Content and Student Learning:** This is the area in which we would like to concentrate more effort, so we can get out of the System Administrator/User Support business. Our biggest challenge has been convincing teachers that connectivity can improve their teaching. We are constantly looking for good curriculum that integrates Internet access.....
7. **Organizational Change:** This is the area that needs the most attention. Real attitudinal changes need to happen. That kind of change happens very slowly, so we have to be patient and keep going, against the flow, if necessary....The

administration of the school district sets the tone for how things are done there....The school reforms that have been imposed on the districts have created an atmosphere of change. Teachers themselves are being asked to change—from the "sage on the stage" where they are information givers, to the role of coaches, in which students are more responsible for their own learning. Scheduling changes (block schedule) help free up more blocks of time in which teachers can work on changes.

Right now teachers view connectivity as something more to do, and they already have enough to do. They have to struggle with issues such as how to effectively use one or two computers in a classroom of 30 students, how to control the access of the students to the material they want them to see and use, how to find the time to explore the Internet for things they want to use.

Connectivity for students, teachers, and schools is a complex problem, and one that will not be solved quickly. I think it will be solved eventually—and our students will be better able to enter the workplace with the skills they need to be successful. (Borden, SMILE www, 1995)

Computers, video technology, and a variety of other electronic equipment are already part of the everyday lives of children, even if on a more limited basis in rural communities. We know even very young children can be taught to use computers, both in a routine manner such as for keyboarding, as well as for complex projects such as those involving the use of data bases and spreadsheets, and for more extensive research projects either utilizing comprehensive CD-ROM programs or the immense resources available via the Internet. The computer, coupled with camcorders and other video tools, can be used in many ways to enhance communication and presentation skills.

Telecommunications technologies are also being used effectively with gifted students, with handicapped students, and with "at risk" students. The issue is no longer whether technology should be used in schools but how. This viewpoint, presented in a clear manner in 1985 as cited below, continues to be emphasized in all recent school reform reports:

The main point is that computers will be used in all areas of society, including education. The only reasonable course for educators [and policy makers] to take is to meet this challenge in ways that will improve education for children. Given that children will use computers, educators need to decide what type and level of use is appropriate for individual children. It is true that society is moving away from knowing about computers in the technical sense and toward knowing about how to use computers; still, some basic knowledge about how computers work may be necessary to fully understand the many ways in which these machines can be used. It is these uses—finding and manipulating information, solving problems, creating, communicating, and learning—that must be the central concern of those responsible for children's learning. The fears of losing competence in basic skills or mechanizing children and their learning will then be unfounded. Research indicates that—*used wisely*—computers can help humanize and improve the

intellectual quality of educational environments. (Riedesel and Clements, 1985, p.13)

## **Educational Reform and Technology- Using Information Resources to Support Student-Centered Learning**

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As was described in the initial section, America's businesses are facing far-reaching pressures to restructure themselves to be competitive in a global economic. Different kinds of businesses and industries will naturally design their own strategies hopefully to maximize their success. In school settings, whether rural or urban, there are certain common program approaches that reflect the new organizational model presented by the Commission on the Skills of the American Workforce and that are consistent with the recommendations in the SCANS reports. These educational approaches are forcefully presented in a report prepared by SRI International, titled *Technology's Role in Educational Reform*. The report strongly recommends that several significant changes in the structure of the school day be made and addresses the role that technology can play in reform:

Educational reform calls for a shift away from organizing instruction around short blocks of time devoted to lecture or practicing discrete skills in specific academic disciplines toward an emphasis on engaging students in long-term, meaningful projects. It is well documented that technology can enhance student acquisition of discrete skills through drill and practice. This study addresses the question of whether technology can provide significant support for constructivist, project-based teaching and learning approaches and the associated issues of the elements needed for an effective implementation of technology within an educational reform context...

The model of constructivist teaching that motivated our research design has student involvement in complex, meaningful tasks or projects at its core. Once a commitment is made to structuring the classroom around such projects, nearly every other aspect of pedagogy must change as well. Projects with real-world relevance will always be multifaceted, incorporating both higher-order skills, such as design, composition, and analysis, and more basic skills, such as the mechanics of writing. They will also nearly always be multidisciplinary in nature and will require extended periods of time to complete. The very complexity of the task will make it advantageous to have students work on them in groups, resulting in greater emphasis on teamwork and collaborative skills. Heterogeneous roles will tend to emerge as students tackle different portions of the project. Teachers will design the overall structure for project activities and provide the resources that students need to do them, but students will have much more responsibility for their own learning and for producing finished products that meet high standards....

Constructivist and project-based teaching and learning make severe demands on teachers, and adding technology to the mix, at least initially, adds to the intellectual and logistical burdens. Nevertheless, there were teachers at our case study schools whose classrooms demonstrated what can be done when technology and carefully designed project-based activities are used in concert. The teachers we studied who were involving their students in long-term, complex projects supported by technology found that technology supported their efforts by:

- Adding to the students' perception that their work is authentic and important.
  - Increasing the complexity with which students can deal successfully.
  - Dramatically enhancing student motivation and self-esteem.
  - Making obvious the need for longer blocks of time.
  - Creating a multiplicity of roles.
  - Instigating greater collaboration, with students helping peers and sometimes their teachers.
  - Giving teachers additional time to take on a coaching and advisory role.
- (Means, B. and Olson, K. 1995, p. S-1)

## Implications for State Leadership

Every state is addressing the complex issues of how to respond to pressures calling for educational reform. Within the limited scope of this paper, it would be presumptuous to propose a detailed strategy for developing a statewide Nevada plan for using technology in education. At the same time, various national research studies suggest a number of general roles that should be addressed in any such plan. Five are recommended here:

### **1. Leadership and advocacy**

The President, Vice President and Secretary of Education have provided significant visibility regarding the opportunities that technology offers within the context of educational reform. The Governor and the Nevada Legislature should take full advantage of national initiatives, including federal funding support, and provide the same level of visibility throughout the state. A recent RAND report emphasizes this need for advocacy through the recognition of excellence:

Leadership can also be provided by identifying and recognizing outstanding performance. One of the most powerful national programs affecting the private sector has been the Baldrige Awards for quality management. These awards have inspired many companies to undertake extensive efforts to improve the quality of performance of their entire organization. Various programs to recognize effective schools have had similar, if less well publicized, effects. Effectively publicized programs that appropriately recognize technology-enabled schools, effective educational software, or



specific classes of educational technology applications can provide strong guidance and incentives to schools, school systems, and the private sector. (Glennan and Melmed, 1996, pp. 106-107)

## **2. Obtain and Disseminate Better Information to Community and Education Leaders**

Every state gathers educational statistics and general program information and shares that information in appropriate forms with its constituencies. It seems entirely appropriate, given the importance of technology, to expand current reporting requirements to include availability and application of instructional technology. In rural areas in particular, schools need to have models of how to implement programs that purposefully involve the community in utilizing worldwide information resources to implement new project-based experiences, especially when student products can easily be published on the school's world wide web site.

There is a second critical aspect regarding the status of schools and their readiness to utilize new technologies: It is important for the State to be aware of any impediments to implementing strong technology programs. Therefore, every district should undertake a detailed survey of school electrical systems and provide feasibility reports to the Legislature. This information will be essential in order to develop realistic financial priorities for multi-year plans to deploy technology on a scale that results in equitable access for all students in the state. Such reports should be a part of a comprehensive assessment of facilities and capital outlay needs discussed elsewhere in this report.

Clearly, every school must have sufficient electrical and networking capacity, based on state standards and support, before it can take advantage of new technology resources. Older school facilities, in particular, may present significant obstacles that need to be overcome in order to insure that students in such locations have reasonable access to these new powerful information resources with as little delay as possible.

## **3. Provide Internet Connections for the Department of Education, and other parts of state government.**

The Legislature has already committed substantial resources to establish the Nevada School Network and to provide Internet connectivity to every public school. The promise of this investment will not be realized until every classroom and every school district employee and every employee of the Department of Education has ready access to the Nevada School

Network. Once this is accomplished, extensive communication between districts and Department administrators can be undertaken at much lower cost and with greatly enhanced efficiency. Through telecommunications, the distribution of a wide variety of correspondence, official notices, state policies, budget information, grant announcements and so on can be handled in a rapid manner. When appropriate, specific audiences can be targeted for group mail. General news can be handled via www bulletin boards and group mail or "listservs." When everyone in the educational community has access to the NSN, the potential for enhancing communication will be substantial indeed.

#### **4. Develop incentives which promote local program planning and evaluation.**

Virtually every major educational technology research report, along with educational reform studies, provides a caveat with regard to the deployment of electronic technology into schools: "Carefully planned programs...". More than most other recent innovations promising great benefits to students and teachers, the introduction of technology into schools should be accompanied by resources necessary to allocate time to allow staff to work collaboratively with parents and students to create a shared instructional vision, time for exploring how to use hardware, time for teachers to explore and experiment with software, laserdisc, and CD-ROM programs so that they can provide basic answers to questions tossed at them by eager students, and time for teachers and administrators to confer with other peers who have already had some experience with what can go wrong and what techniques might possibly minimize such obstacles.

While there are likely to be other critical elements of school planning that might be appropriate for assembling data about schools based on school plans, there are at least seven critical elements that should be addressed in any school technology-enriched curriculum (TEC) plan:

- A School's Educational Vision**
- Information Resources to Enrich the Curriculum**
- Staff Development and Technical Assistance**
- Equitable Access to Technology**
- Evaluation and Accountability processes**
- Telecommunications Infrastructure**
- Remodeling of School Facilities/building new schools  
based on state standards.**

The state could simply mandate that schools and districts develop appropriate TEC plans or it might consider offering mini-grants or some other type of fiscal incentive to cover some of the costs for this essential

process. Every school (indeed every teacher) should be encouraged to take time to establish its own educational expectations, prepare benchmarks presenting standards for the availability of technology resources, and plan a series of implementation activities that can be part of a mid-year reassessment and an end-of-the year evaluation report for district administrators and board members.

#### **5. Foster the Development of Effective Assistance Organizations**

Schools will need assistance in order to successfully install and utilize a wide array of technology tools. This assistance can take many forms, including the use of technology to exchange problems and share solutions. To quote the RAND report again, "This assistance should be concrete, timely, and sustained. It should be provided on terms that the recipients find helpful, rather than on terms convenient to the provider." (RAND, pp 106-107).

With the support of the WestEd Eisenhower Regional Consortium, the Nevada Rural Alliance has been organized "to work with teacher trainers in the rural areas of the state. Washoe County works with teachers in the Greater-Reno area, and Clark County works with teachers in the Greater Las Vegas area. Almost all of the teachers involved continue to work as classroom teachers while serving as teacher trainers." (WestEd ERC www, 1996) NevadaNet has received another grant from the National Telecommunications and Information Infrastructure Assistance Program "to create a system of information brokers who will train end users in remote, rural communities to find and use on-line resources. The emphasis is on creating a human infrastructure for end users. No doubt several other such assistance organizations are already in place or are being planned.

The State Department of Education needs to evaluate the degree to which these existing organizations are prepared to respond to teachers' needs for assistance related to the deployment of new technologies and the use of all to often complex programming for which manuals are inadequate. At the very least, it is likely that all existing assistance staff will need additional training in order to provide effective technology-related assistance to teachers and administrators.

#### **A Means for Proceeding**

If Nevada wishes a means by which instructional and, perhaps, management, technology could be financed, drawing upon both state and local resources, consideration can be given to a plan such as the following.

*Credit Enhancement.* The State assuredly is among the Nevada public sector agencies with the most secure credit rating. One means for taking advantage of this condition, and simultaneously drawing upon locally generated revenues for instructional and managerial technology, is to establish a state education technology financing credit enhancement agency. This agency, either newly enacted or adapted from existing authority, could be authorized to sell state bonds, for a specified ceiling amount, revenues from which could then be lent to local school districts for purchasing and maintaining education technology.

*State Allocation Board.* In addition to a credit enhancing component, the state would need to establish an administrative body capable of reviewing local school district education technology funding applications. This agency would then determine local school district priorities for state bond revenues.

*Investment Opportunity.* Such a state loan fund arrangement would provide assurance to investors. These assurances would likely render the bonds attractive to pension funds such as those operated in behalf of teachers and other professional educators.

*Local School District Assistance.* The administrative agency could also serve to provide local school districts advice regarding the purchase and use of instructional and management technology. It could also insist, as a condition of the loan, that the school district invest in the professional development activities necessary to ensure productive deployment and use of the technology. Finally, as another loan condition, the state administrative agency could ensure that steps were taken to maintain the newly purchased equipment correctly.

*District Loans.* Nevada's local school districts, once applying for and receiving education technology funding, would repay such loans through operating expenses. The utility of this mechanism is that the existing "Nevada Plan" substantially equalizes school district revenue raising capacity. Hence, by paying education technology loans through operating revenues, local school district funding ability is equalized.

*Decision-Making Discretion.* Because the loan fund would be repaid from operating revenue, local school districts need not obtain any greater permission than approval from the local school board. Should it desire, the legislature in its wisdom could specify that such loan applications necessitated a two-thirds local school board vote or some other super majority.

*Local District Option.* Any local district desiring of continuing to purchase education technology under currently operating arrangements would be free to do so. The state education technology loan fund would be available only for districts which voluntarily chose such a mechanism.

*State Assurance.* The state would continue to retain overall fiscal control by authorizing the level of bonds to be sold, exercising discretion over school districts eligible to receive and actually granted education technology loans, and by overseeing, as is now the case, local school district revenue.

## Conclusion

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Clearly, there are additional state and district level issues, some of which might need to be addressed more swiftly than the actions outlined above. But most states are developing reform initiatives that include these five aspects of comprehensive educational reform leadership.

The Kickstart Report was submitted in February to the President, and with the support of the Benson Foundation, it has now been reformatted for dissemination via the world wide web (see World Wide Web Resources - National and Regional) and the web site has been enhanced to include—along with several other valuable documents—status reports for every state.

With respect to the use of telecommunications in particular, but certainly appropriate regarding the diverse array of tools which schools may choose to use, the National Information Infrastructure Advisory Council provides a clear message encouraging each of our communities, no matter how small, no matter how poor, to be involved in this effort to revitalize our schools:

After 2 years of study and talks with many people across the country in all walks of life, the Council concludes that the best approach for this Nation is to bring the Information Superhighway to the neighborhood. That is most rapidly accomplished through connecting schools, libraries, and community centers where everybody—young and old, rich and poor, those with and without disabilities—can obtain affordable access to the Superhighway.

But each community needs to develop its own approach. There is not a "one-size-fits-all-communities" approach—instead, the key players from each community should come together to determine how that community's interest can best be served. (Kickstart www, The Key Messages of Kickstart, 1996)

Finally, the Kickstart Report also offers this eloquent "Call to Action:"

Imagine a Nation where every student in every classroom visits libraries and museums of the world electronically, where families and friends widely separated by distance converse easily and inexpensively via electronic mail, where every library is a local information hub, and where community centers help local residents learn, use, and benefit from new communications technologies. That America can become a reality in just a few years. Every person in the country will benefit. Community leaders and the public face an historic opportunity. The time to act is now. (Kickstart www, A Call to Action, 1996)

# Technology Paper Appendix A

## SCANS-What Work Requires of Schools

### Five Competencies

[Each of the five competencies have specific important sub-skill components which are explained in detail in What Work Requires of Schools. Every teacher should be concerned with providing learning experiences that appropriately address the development of these competencies over a sustained period of time.]

**Resources:** Identifies, organizes, plans and allocates resources

Workers schedule time, budget funds, arrange space, or assign staff.

**Interpersonal:** Works with others

Competent employees are skilled team members and teachers of new workers; they serve clients directly and persuade co-workers either individually or in groups; they negotiate with others to solve problems or reach decisions; they work comfortably with colleagues from diverse backgrounds; and they responsibly challenge existing procedures and policies.

**Information:** Acquires and use information

Workers are expected to identify, assimilate, and integrate information from diverse sources; they prepare, maintain and interpret quantitative and qualitative records; they convert information from one form to another and are comfortable conveying information, orally and in writing, as the need arises.

**Systems:** Understands complex inter-relationships

Workers should understand their own work in the contest of the work of those around them; they understand how parts of systems are connected, anticipate consequences, and monitor and correct their own performance; they can identify trends and anomalies in system performance, integrate multiple displays of data, and link symbols (e.g., displays on a computer screen) with real phenomena (e.g., machine performance).

**Technology:** Works with a variety of technologies

Technology today is everywhere, demanding high levels of competence in selecting and using appropriate technology, visualizing operations, using technology to monitor tasks, and maintaining and trouble-shooting complex equipment

Source: SCANS, What Work Requires of Schools, 1991, pp. 11-12.

## A Three Part Foundation

**Basic Skills:** reads, writes, performs arithmetic and mathematical operations, listens and speaks

- A. **Reading** - locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules
- B. **Writing** - communicates thoughts, ideas, information, and messages in writing; and creates documents such as letters, directions, annuals, reports, graphs, and flow charts
- C. **Arithmetic/Mathematics** - performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques
- D. **Listening** - receives, attends, interprets, and responds to verbal messages and other cues
- E. **Speaking** - organizes ideas and communicates orally

**Thinking Skills:** Thinks creatively, makes decisions, solves problems, visualizes, knows how to learn, and reasons

- A. **Creative Thinking** - generates new ideas
- B. **Decision Making** - specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative
- C. **Problem-Solving** - recognizes problems and devises and implements plan of action
- D. **Seeing Things in the Mind's Eye** - organizes, and processes symbols, pictures, graphs, objects and other information
- E. **Knowing How to Learn** - uses efficient learning techniques to acquire and apply new knowledge and skills
- F. **Reasoning** - discovers a rule or principle underlying the relationship between two or more objects and applies it in solving a problem

**Personal Qualities:** Displays responsibility, self-esteem, sociability, self-management, and integrity and honesty

- A. **Responsibility** - exerts a high level of effort and perseveres towards goal attainment
- B. **Self-Esteem** - believes in own self-worth and maintains a positive view of self
- C. **Sociability** - demonstrates understanding, friendliness, adaptability, empathy, and politeness in group meetings
- D. **Self-Management** - assesses self accurately, sets personal goals, monitors progress, and exhibits self-control
- E. **Integrity/Honesty** - chooses ethical courses of action (SCANS, 1991, p. 16)

The SCANS report provides a more extensive explanation of these foundation skills and describes their relationship to the five competencies in Part III of the report—**Implications for Learning:**

We believe, after examining the findings of cognitive science, that the most effective way of teaching skills is "in context." Placing learning objectives within real environments is better than insisting that students first learn in the abstract what they will then be expected to apply. SCANS suggests three principles from cognitive science to guide real contextual learning in all our schools:

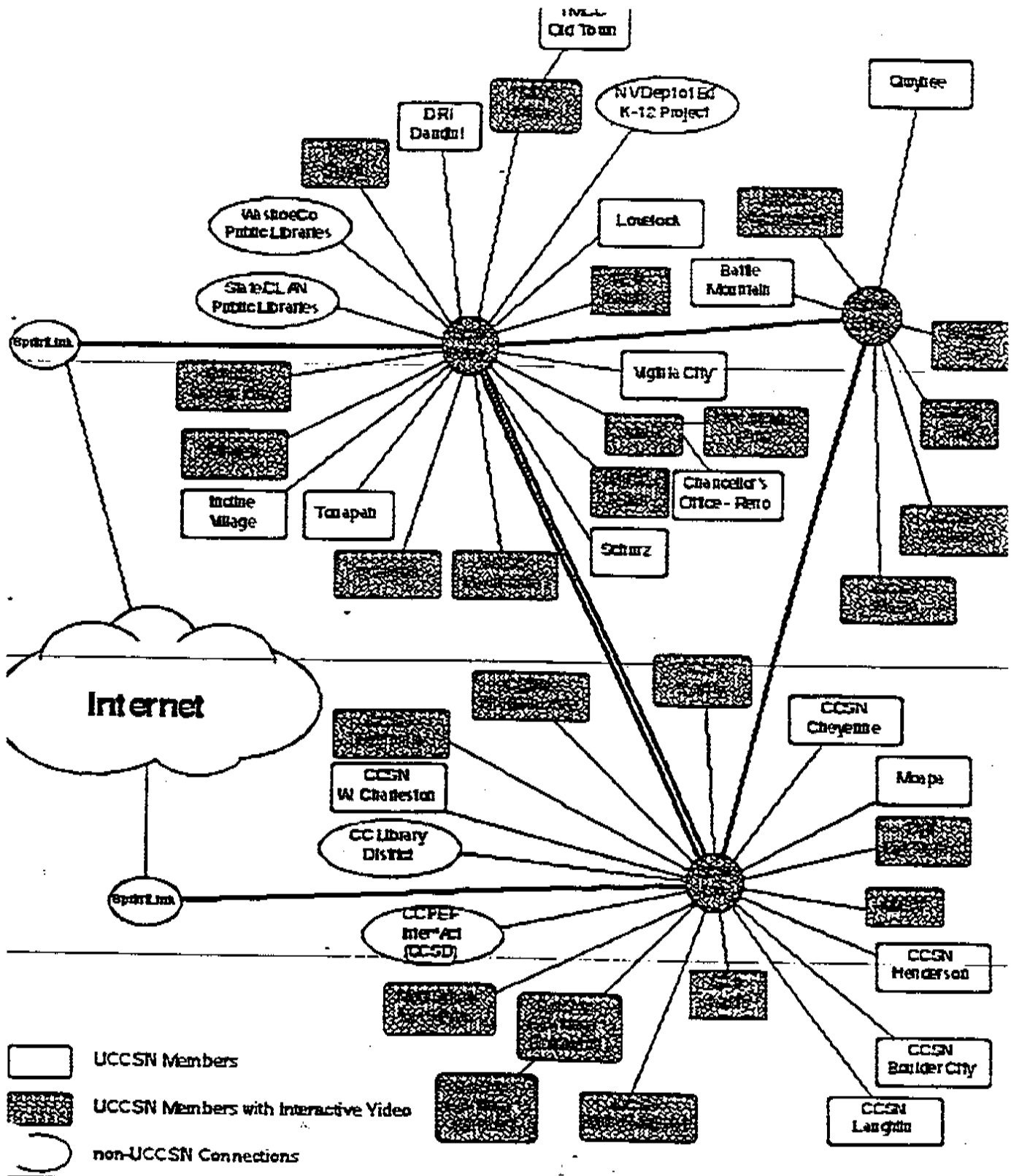


- Students do not need to learn basic skills before they learn problem-solving skills. The two go together. They are not sequential but mutually reinforcing;
- Learning should be reoriented away from mere mastery of information and toward encouraging students to recognize and solve problems; and
- Real know-how—foundation and competencies—cannot be taught in isolation; students need practice in the application of these skills.

Source: SCANS, *What Work Requires of Schools*, 1991, p. 19

# Appendix B

## NevadaNet Connections - Schematic Map



## Technology Paper Appendix C

### World Wide Web Resources— Nevada

Name	Internet Address
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<http://www. > precedes each of these "URL" locations, except as noted.

#### Nevada Public School Locations

See WEB 66: International  
School Registry index:

[http://web66.coled.umn.edu/schools/  
US/Nevada.html](http://web66.coled.umn.edu/schools/US/Nevada.html)

Advanced Technologies  
Academy

[vegas.com/atech/](http://vegas.com/atech/)

Nevada School Network  
Clark County School  
District

[nsn.scs.unr.edu](http://nsn.scs.unr.edu)  
[co.clark.nv.us](http://co.clark.nv.us)

#### Nevada Higher Education Locations

UCCSN  
NevadaNet

<http://www.nevada.edu>  
[nevada.edu/home/17/mitch/  
NevadaNet.html](http://nevada.edu/home/17/mitch/NevadaNet.html)

University of Nevada Las Vegas  
Community College of  
Southern Nevada  
Great Basin College  
Truckee Meadows  
Community College  
Western Nevada  
Community College  
Desert Research Institute  
National Supercomputing

[unlv.edu](http://unlv.edu)  
[cssn.nevada.edu](http://cssn.nevada.edu)  
[scs.unr.edu/nbcc](http://scs.unr.edu/nbcc)  
[scs.unr.edu/tmcc](http://scs.unr.edu/tmcc)  
[scs.unr.edu/wbcc](http://scs.unr.edu/wbcc)  
[dri.edu](http://dri.edu)

**Center for Energy and  
the Environment  
Harry Reid Center for  
Environmental Studies**

**nscee.edu/**

**[http://eeyore.lv-hrc.nevada.edu/  
hrcinfo.html](http://eeyore.lv-hrc.nevada.edu/hrcinfo.html)**

### **Federal Government Programs in Nevada**

**Yucca Mountain Project,  
U.S. Department  
of Energy  
Nevada Test Site**

**<http://www.ymp.gov/>  
[http://eeyore.lv-hrc.nevada.edu/  
~nramp/overview.htm](http://eeyore.lv-hrc.nevada.edu/~nramp/overview.htm)**

**U.S. Geological  
Society-Nevada  
Intertribal Council of  
Nevada**

**<http://h20.usgs.gov/public>**

**<http://itcn.org/tribes/tribes.html>**

### **Nevada Public Libraries**

**Clark County Public Library  
Washoe County Library  
- Internet Branch  
Nevada Education  
Online Network**

**lvccld.lib.nv.us**

**washoe.lib.nv.us**

**telnet: xxxxx**

**State of Nevada**

**nevada.gov**

## World Wide Web Resources - National and Regional

<b>Name</b>	<b>Internet Address</b> <http://www. > precedes each of
<b>California Technology Information Project</b>	<a href="http://scooe.k12.us/caltip/">scooe.k12.us/caltip/</a>
<b>National Center for Technology Planning</b>	<a href="http://www2.msstate.edu/~lsa1/nctp/index.html">www2.msstate.edu/~lsa1/nctp/index.html</a>
<b>National Science Foundation</b>	<a href="http://nsf.gov">nsf.gov</a>
<b>National Telecommunications and Information Agency</b>	<a href="http://ntia.doc.gov">ntia.doc.gov</a>
<b>Telecommunications Information Infrastructure Assistance Program (NTIIA)</b>	<a href="http://ntia.doc.gov/www/ofiahome/tiiap">ntia.doc.gov/www/ofiahome/tiiap</a>
<b>RAND</b>	<a href="http://rand.org">rand.org</a>
<b>SMILE: Science and Math Investigative Learning Experiences, Oregon State University</b>	<a href="http://cs.orst.edu/SMILE/home">cs.orst.edu/SMILE/home</a>
<b>State and Local Strategies for Connecting Communities—National Report and the Status of Strategies in Nevada (Also available for other states)</b>	
<b>National Kickstart Initiative—Benton Foundation</b>	<a href="http://benton.org/State/Statehome.html">benton.org/State/Statehome.html</a>
<b>Telis Fondation—Telemation Project</b>	<a href="http://telis.org">telis.org</a>
<b>U.S. Department of Education</b>	<a href="http://education.gov">education.gov</a>

**WestEd Regional Laboratory—  
Eisenhower  
Regional Consortium (WERC)** [wested.org](http://wested.org)

**Western Interstate Commission  
for Higher Education** [wiche.edu](http://wiche.edu)

**Utah Valley On-Line** [uvol.com/nv-east/](http://uvol.com/nv-east/)

**Web 66 International Registry  
of Schools Online** <http://web66.coled.umn.edu/>

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## Appendix D

### **Annotated Bibliography on School District Size**



Annotated Bibliography on School District Size  
1964-1995

The following document is an annotated bibliography of the principal research regarding the impact of school and district size on various education components, including costs and student achievement.

1995\_\_\_\_\_

Duncombe, William, Miner, Jerry and Ruggiero, John (1995). *Economics of Education Review*, v 14, n 3, pp 265-284.

This study estimates the effects of school district size using a cost model which is based on a newly derived model of educational production which relates student achievement to school resources and socioeconomic factors. Applying the model to extensive data from 692 school districts in New York, the authors identified districts which could benefit from consolidation. They found that per-pupil total costs decline as the number of pupils served increases, but that the cost curve flattens out very quickly. The principal cost savings are exhausted by the time a district reaches an enrollment beyond 500 to 1000 pupils. In fact, there may be diseconomies to expanding district enrollment beyond 5000 pupils. Per-pupil costs begin to increase very slowly as enrollment rises above 5000-10,000, thus forming a semi-U shaped cost curve. District costs are identified in five categories: instructional, transportation, operating and maintenance, administration and non-overhead. Of the 692 districts in the state, 90 districts had fewer than 500 pupils. After further analysis, only 17 of these districts were identified which might benefit from full consolidation. 43 other districts showed indications of benefiting from sharing of administrative costs with a neighboring district. The study warns state decision makers that only minimal savings can be realized from consolidating very small districts which are not too geographically isolated. Though not the intent of the study, they found that potential savings, in theory at least, would be greater from "deconsolidating" large districts than could be realized from consolidating small districts. No examples of deconsolidations were cited.

1994\_\_\_\_\_

Adams, Jacob E., Jr. (1994). "School District Size and State Educational Costs in Kentucky". Research report for the Pritchard Committee for Academic Excellence, Lexington, KY. (48p.)

Thompson, John A. (1994). Scale Economies and Student Performance in Hawaii. *Journal of Education Finance*, v 19, pp 270-291.

This study of 115 elementary and middle schools in Hawaii looks for economies of scale in terms of both per-pupil expenditures and school size, and attempts to relate them to what the dollars buy in terms of student performance. Variables include SAT test scores for the 3rd and 6th grades, enrollment and number of 3rd and 6th grade classrooms in the schools, percent on free and reduced lunch, percent of school suspensions, percent of special education students and the percent of experienced teachers. Schools were grouped into 3 size categories. The result of the initial analysis was that there is significant difference in per pupil costs by size of schools (in groups). There was no significant difference in achievement in the third grade based on size. But in the 6th grade, smaller schools had better test scores than either of the groups of larger schools. Thus, smaller schools had higher costs, but in turn had better achievement in the 6th grade math and reading. However, the best descriptor of both reading and math achievement was socio-economic condition, as measured by percent of students on free and reduced lunch. ("Small" schools were defined as schools with two or less classrooms per grade, while "large" schools had four or more. "Medium" fell in between).

Walberg, Herbert J., Herbert J. Walberg, III. (1994). Losing Local Control. *Educational Researcher*, v 23, n 5, pp 19-26.

Study of 8th grade math scores suggests that achievement is inversely related to school and district size indexes, and to state funding share.

Young, Ed. (1994) Questioning Consolidation. *Tennessee School Boards Journal*. Spr. 1994, pp 33-37.

Suggests that school district consolidation will neither save money nor improve educational quality. Recommends consideration of alternatives and case-by-case examination.

1993

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Deller, Steven C., Edward Rudnicki (1993). Production Efficiency in Elementary Education: The Case of Maine Public Schools. *Economics of Education Review*, v 12, n 1, pp 45-57.

The relationship between school expenditures and student performance is examined using a method of estimating production efficiency. The results suggest that absolute school size can have a negative impact on student achievement. They also suggest that a higher proportion of the school's resources devoted to instructional

activities may result in enhanced student achievement. However, no pattern was observed between the level of production efficiency for each school and school size.

Duncombe, William, Miner, Jerry and Ruggiero, John (1993). "Scale Economies and Technical Efficiency in New York Public Schools", Metropolitan Studies Program Series, Paper No. 163, Center for Policy Research, Maxwell School, Syracuse University.

This is an expanded version of the study published in 1995 by the same authors. (see summary above, for 1995)

Hall, Robert F, Arnold, Robert L. (1993). "School District Reorganization in Illinois: Improving Educational Opportunities for Students." Paper presented at the Annual Conference of the National Rural Education Association (85th, Burlington, VT, October 14-17, 1993).

This paper examines recent school district consolidation in Illinois. A literature review summarizes: (1) evidence that led the state of Illinois to offer financial incentives for school and school district consolidation; (2) research on strengths and weaknesses of large and small schools and large and small school districts, etc. Preliminary results suggest that the advantages of reorganization/consolidation greatly outweigh the disadvantages. Reorganized districts have provided students with a broader curriculum; teachers with increased salaries, benefits, and opportunities to focus on fields of interest; and taxpayers with a more efficient school system. Some students have experienced a modest increase in travel time. Nevertheless, reorganization alone is not the solution to current school finance problems. When reorganized districts have spent their incentive funds, they will find themselves in the same financial difficulties as other Illinois districts.

Monk, David H., Haller, Emil J. (1993). Predictors of High School Academic Course Offerings: The Role of School Size. *American Educational Research Journal*, v 30, n 1, pp 3-21.

This study examines the relationship between curricular offerings and high school characteristics, particularly the size of the school and SES. Data from *High School and Beyond* is used. The study finds a positive relationship between the size of a high school graduating class and the number of courses offered. More importantly, it finds that the effects of school size on course offerings varies, depending on the subject area and the level of the course, i.e., advanced, remedial, etc.

Ornstein, Allan C. (1993). School Consolidation vs. Decentralization: Trends, Issues, and Questions. *The Urban Review*, v 25, n 2, pp167-174.

Brief summary of consolidation and decentralization trends in US. Says that no research evidence shows that either improves education.

Advises districts to proceed with caution before adopting changes. Proposes 20 questions to answer that can clarify issues, and help districts resist "educational fads and popular tunes."

1992

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(1992). "Small Schools' Operating Costs: Reversing Assumptions about Economies of Scale", Public Education Association, New York, Exxon Education Foundation, 111p, .

Research evidence indicates that small schools are associated with better student outcomes. The premise that small schools are more expensive has always been false. No research evidence supports the claim that large schools like those found in New York, 1500-4000 students, achieve operational cost efficiencies sufficient to justify their existence or to offset their educationally damaging inefficiencies. Studies show penalties of scale in large schools, and disproportionate increases in management costs. Small schools are economically feasible for NY schools if barriers to change are overcome. Strategies are proposed for direct cost savings through restructuring. Numerous tables and figures and a 71-item bibliography are included in appendixes.

Fowler, William J., Jr. (1992). "What Do We Know about School Size? What Should We Know?" Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA, April 20-24, 1992)

This review examines the effects of secondary-school size upon student outcomes. After outlining the current numbers and sizes of high schools, the paper examines outcomes such as student attitudes, achievement, voluntary participation, and the enduring effects of education. The paper also examines school-size effects upon curriculum. They found that curricular adequacy was reached at a small high school level (that is, a graduating class of 100). Large secondary schools with a graduating class above 750 appear to have deleterious effects on student attitudes, achievement, and voluntary participation.

*Source Book on School and District Size, Cost, and Quality.* (1992). H.H. Humphrey Institute of Public Affairs, Minnesota U. 134p.

This source book brings together research about improving the ways that learning, teaching, and schooling are organized, and how school and school district size may affect such efforts. Six scholars were commissioned to address the questions of how to define quality in education; how school and school district size are related to educational costs and quality; and what recommendations to offer to educators. The papers are described individually in the following six citations:

Gregory, Tom (1992). *Small Is Too Big: Achieving a Critical Anti-Mass in the High School*. In: *Source Book on School and District Size, Cost, and Quality*. H.H. Humphrey Institute of Public Affairs, Minnesota U.

Developing more effective conceptions of the high school may require radically reducing its size. When a school is small enough, students can be trusted with responsibility, control is not a central issue, an individualized program makes sense, and every student and teacher has a say in how the school is run. The leap from the bureaucratic industrial model of schooling to smaller, more personal schools is a paradigm shift that will require policymaker tolerance and support.

Monk, David H. (1992). "Modern Conceptions of Educational Quality and State Policy Regarding Small Schooling Units." In: *Source Book on School and District Size, Cost, and Quality*. H.H. Humphrey Institute of Public Affairs, Minnesota U.

While existing research on school and school district size is not as conclusive as policy makers might wish, it does point toward several new policy directions. Some relevant findings and recommendations are: (1) a larger school or district enrollment does not guarantee desirable results; (2) recommended school sizes have been declining over time, with recent reform efforts emphasizing the restructuring of education, local decision making and autonomy, and establishing "schools within schools" in settings where the school has been judged as too large; (3) each reorganization is highly individualistic (thus reducing the role of "expert knowledge"); (4) as measures of learning outcomes become more refined and more widely available, it becomes less important for the state to specify sizes and organizational structures for schools and districts; and (5) policy makers should remain receptive to novel approaches to reorganization, since the remaining small schools and school districts in the United States are almost without exception "hard cases" to which conventional approaches are not applicable. In place of the "all or nothing" reorganization approach typically sought by state departments of education, a range of alternative approaches has emerged. These include cooperatives and clusters that use a variety of strategies to cooperate across organizational boundaries, locally designed, partial or gradual reorganizations, and cross-function reorganizations in which a single administrative structure oversees all rural community services (including education).

Nachtigal, Paul, (1992). *Remapping the Terrain: School Size, Cost, and Quality*. In: *Source Book on School and District Size, Cost, and Quality*. H.H. Humphrey Institute of Public Affairs, Minnesota U.

This paper examines school size, educational cost, and quality from a third perspective, that of maintaining healthy viable communities. It



is apparent that rural education must be redesigned to be of high quality and yet not extractive of human resources in support of the urban labor force. Where larger numbers would produce economies of scale, these economies can be realized by forming *clusters* of schools to share resources. The different educational functions of the school district may be separated and reorganized to increase efficiency. An appendix gives examples of *clustering*. (emphasis added)

Ramirez, Al, (1992). *Size, cost, and Quality of Schools and School Districts: A Question of Context*. In: *Source Book on School and District Size, Cost, and Quality*. H.H. Humphrey Institute of Public Affairs, Minnesota U.

A literature review of reports on school and school district size as they relate to educational quality and finance. Contains research on the relationships of size to course offerings, teacher qualifications, student achievement, student behavior, student participation, and school climate. The research shows that any type of school, small or large, urban or rural, can achieve successful outcomes. The optimum size for educational institutions is an elastic concept related to institutional mission and setting and available resources. New technology has the potential to make many size issues insignificant.

Rogers, Bethany, (1992). *Small Is Beautiful*. In: *Source Book on School and District Size, Cost, and Quality*. H.H. Humphrey Institute of Public Affairs, Minnesota U.

This paper presents research findings and the testimony of educators, students, and researchers demonstrating that small schools meet the essential conditions for providing high-quality education to all students. These essential conditions are: (1) students are known well by their teachers; (2) students are actively engaged in learning and in school activities; and (3) the school provides a secure and caring environment. While common sense and recent research clearly favor the small school environment, we remain wedded to powerful images of the comprehensive high school, spawned during the very different social and educational conditions of the 1950s. Moving beyond this nostalgic vision of "high school" may be the hardest step in educational improvement.

Walberg, Herbert J., (1992). "On Local Control: Is Bigger Better?" In: *Source Book on School and District Size, Cost, and Quality*. H.H. Humphrey Institute of Public Affairs, Minnesota U.

Data from the National Assessment of Educational Progress and federal reports were analyzed for 37 states and the District of Columbia.

Average state scores for eighth grade mathematics proficiency were significantly and negatively related to average school size, average district size, and percentage of educational funding (excluding federal funds) paid by the state. This finding is supported by a literature review

covering research on economies and "diseconomies" of scale, the relationship of organizational size to efficiency and productivity, the growth of state educational bureaucracies, the influence of school size on educational outcomes, and the effects of "remote" educational funding on local control and accountability.

1991

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Fowler, Jr., William J. & Walberg, Herbert J., (1991). *School Size, Characteristics, and Outcomes*. *Educational Evaluation and Policy Analysis*, v 13, pp 189-202.

A study of state data for 293 public high schools in New Jersey in 1984-85. They studied the possible influence of 18 social, organizational and financial variables (dependent) on 23 learning and related outcomes (independent variables). Linear regression analysis was used to analyze the affect of the independent variables on each of the outcomes, holding all others constant. (Curvilinear analysis was also used, but the results were no more significant, so they were not presented.) The first two dependent variables with the most consistent results were % low income and district SES. The next two were school size and number of schools in district. They conclude that "smaller school districts and smaller schools, regardless of socioeconomic status and grade level, may be more efficient at enhancing educational outcomes."

1990

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Berliner, Bethann, (1990). "Alternatives to School District Consolidation". Knowledge Brief, n 2, Far West Lab, 9p.

This report explores alternative solutions to school district consolidation for making needed improvements, including interdistrict sharing, partial reorganizations, extradistrict cooperation, the use of intermediary units and instructional technologies. Describes the promises and limitations of such alternatives.

Williams, Davant T., (1990). "The Dimensions of Education: Recent Research on School Size." Information Analysis Report. Clemson Univ., SC. Strom Thurmond Inst. of Government and Public Affairs.

This paper reviews selected research of the past decade concerning the optimal size of elementary and secondary schools in the United States. Recent research indicates that: (1) small schools can be highly effective in providing quality education; (2) large schools may not provide the economies of scale nor the quality of education claimed to justify their largeness; (3) school size tends to be dependent on the influences of class size and district size; (4) school district size is the most significant

factor in determining school size; and (5) school size is of particular concern in rural areas, where small schools are prevalent and where proposals for consolidation should be weighed in the context of research findings on the relative effectiveness of small versus large schools. This report contains 30 references.

1989-----

Kennedy, Robert L., (1989). "Size, Expenditures, MAT 6, Scores, and Dropout Rates: A Correlation Study of Arkansas School Districts". A research report. Arkansas, RIE, July, 1989.

This study investigated the linear relationships of school district size to expense per ADA, test scores, and high school dropout rates. Correlation analysis revealed that the relationship among the above variables was slight. The data was drawn from 330 school districts in Arkansas. There is little or no reason to expect that the consolidation of small districts in Arkansas will necessarily reduce per pupil expenditures, increase test scores or reduce dropout rates.

Cienkus, Robert T. , Berlin, Barney M. (1989). Introduction and Summary to: "Size: The Ultimate Educational Issue". *Education and Urban Society*, v 21, n 2, The February, 1989 issue of this journal is devoted to the subject of school and school district size in education. The following three citations are from this issue.

Jewell, Robert W. (1989). School and School District Size Relationships: Costs, Results, Minorities, and Private School Enrollments. *Education and Urban Society*, v 21, n 2, pp140-153.

Reviews data on the numbers and size of schools, districts and education systems in the United States. Looks at relationships between size and test scores, graduation rates, costs, and private school enrollment. Concludes that "smaller is better".

Walberg, Herbert J. (1989). District Size and Student Learning. *Education and Urban Society*, v 21, n 2, pp154-163.

Recent research suggests that the consolidation of school districts for the past half century may have been a move in the wrong direction. It appears that generally the smaller the district, the higher the achievement when the socioeconomic status and per-student expenditures are "taken into account". He expresses hope that the decentralization of the Chicago public schools may provide a positive test of the idea that "smaller is better".

Webb, Florence R. (1989). A District of a Certain Size, An Exploration of the Debate on School District Size. *Education and Urban Society*, v 21, n 2, pp125-139.

Through discussion and selective literature review Webb gives an overview of the history of district consolidation in this century and then disposes of the common arguments against small districts, concluding with praise for continuing diversity among existing school districts and a call for more research.

Fowler, William J., Jr. (1989). "School Size, School Characteristics, and School Outcomes." Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA, March 27-31, 1989).

A study investigated the possible dependence of educational outcomes on staff attributes and organizational size once socioeconomic indexes are taken into account. All data were obtained from the New Jersey Department of Education. The variables of interest and their operational definitions include school characteristics, teacher characteristics, district scholastic aptitude tests, district characteristics, and many school outcomes. Seven variables were significant: percentage of low income students in a school; size of school; number of schools; percentage of teachers with a bachelor's degree; pupil-teacher ratio; average teacher salary; and the district's socioeconomic status. An inverse relationship between school size and student outcomes is demonstrated. The size of schools may also affect the internal allocation of funds from the school district. Appended are 32 references, a 5-page list of variable definitions, a table of univariate statistics, and a table of results of backward stepwise regression.

1988

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Friedkin, Noah E., Necochea, Juan. (1988). School System Size and Performance: A Contingency Perspective. *Educational Evaluation and Policy Analysis*, v 10, n 3, pp 237-49.

Data for third, sixth, eighth, and twelfth graders from the 1983-84 California Assessment Program (CAP) are presented to support a new theory on the relationship between the size and performance of school systems. The theory predicts that the strength and direction of the relationship depend on the socioeconomic status (SES) of school systems. They found preliminary evidence that as the SES of a school system goes up, the association between the size and performance of school systems goes from strongly negative to mildly positive. Thus small schools appear to work much better for low SES students, while high SES students appear to perform a little better in larger schools. Measurements of small and large were relative within the sample, presumably all schools in California which administered the CAP tests.

Rincones, Rodolfo (1988). "Exploring Alternatives to Consolidation", ERIC Clearinghouse on Rural Education and Small Schools, Las Cruces, NM. (14p.)

Suggests several types of partial reorganization and methods of sharing as alternative solutions to school district problems. Mentions that Monk and Haller, (1986) have proposed a method for state facilitation of tuition across district borders.

Walberg, Herbert J., William J. Fowler, Jr. (1987) Expenditure and Size Efficiencies of Public School Districts. *Educational Researcher*, v 16, pp 5-13.

Test scores in New Jersey were regressed on indexes of district SES, per-student expenditures and district size. They found that students in smaller districts generally achieved more than those in larger districts and that higher expenditures were not significantly associated with test scores, when SES was taken into account.

White, Jane Robertson (1986). "To Reorganize or Not Reorganize: A Study of Choice in a Small District". Report to the New York State Legislature. University of New York, Ithaca. (80p)

A case study of a very small school district (187 students, K-12) with declining enrollment. Concludes that although there is no doubt that Hamlet students could benefit academically and socially from district reorganization, change is advisable only if strong community support exists.

1986

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Bilow, Scott (1986). "Long Term Results of Centralization: A Case Study of a Large-Rural New York School District." A Report to the New York State Legislature, Albany. State Univ. of New York, Ithaca. Coll. of Agriculture and Life Sciences at Cornell University.

A case study of the results of consolidation of 50 rural school districts in 1950 to form a single district which now has about 2000 students. Says that parents are generally pleased with the district today and that it compares favorably with other districts its size.

Bilow, Scott (Monk, Haller and Bail, investigators) (1986). "The Size of School Districts: Economic and Psychological Perspectives". New York State Legislature, Albany. State Univ. of New York, Ithaca. Coll. of Agriculture and Life Sciences at Cornell Univ. (34p).

The relationship between the costs of schooling and the size of school districts is discussed. The first section of this paper provides a critical survey of what economists have written about economies of scale and questions whether bigger is really cheaper or more efficient, as is generally found in commercial endeavors. The second section examines empirical studies by psychologists attempting to connect size with other factors (such as buildings, teaching staff, and organization, all of which are needed regardless of the school size) and trying to discover the optimal size for schools by using input (expenditures) and

output (schooling) measures. The final section discusses perceptions on whether students learn better in larger or smaller schools and considers what effects school size has on: participation levels in extra-curricular activities, and the effect of participation on learning; achievement (which is not just a function of class size); attitudes (such as how students view their school and whether they will continue with higher education); and the lasting effects of school size on participation in adult life and social activity. Also included are a summary and suggestions on how states might put to use knowledge about economies of scale in schooling. Concludes that though the research yields mixed results, it is important to consider population density and transportation costs and quality of education measures, which are not considered in this report. Cautions decision makers to look at the ambiguous evidence before embarking on wholesale plans to consolidate small districts.

Kidd, Kenneth (1986). "Small School District: An Asset to Education". *Spectrum*, v 4, n 1, pp 16-21.

Based on experience in Indiana, contends that the superiority of consolidated schools is exaggerated. With proper planning and innovation, small schools can effectively share human, material and financial resources.

Monk, David H. (1986). "Secondary School Enrollment and Curricular Comprehensiveness". Report to the New York State Legislature, U. of New York, Ithaca. (52p).

Compares curricular offerings of large and small secondary schools. Finds that larger schools may not take advantage of existing size economies or may take advantage in varied ways. Makes case for high school enrollment of 400.

Riew, John (1986). Scale Economies, Capacity Utilization, and School Costs: A Comparative Analysis of Secondary and Elementary Schools. *Journal of Education Finance*, v 11, pp 433-446.

This study presents a U-shaped curve in economies of scale for both elementary and middle schools under conditions of declining enrollment. A cost function shows that changes in enrollment can influence the average cost per pupil for economies of scale. The u-shaped average cost curve reflects the use of a parabola in the estimation equation. The savings for middle schools drop from \$.93/pupil to \$.05/pupil as enrollment rises from 600 to 1000. For elementary schools, the savings drop from \$1.73/pupil to \$.28/pupil as enrollment rises from 200 to 500. Similar U-shaped curves exist for greater utilization of capacity as school enrollment rises.

Rogers, Robert G. and others (1986). "Is School District Reorganization Necessary? A Study of 43 Small Illinois School Districts." Position Paper/Research Report. Illinois, (68p)

This paper contests a 1985 report by the Illinois State Board of Education, which asserted that small schools are inferior and inefficient. A survey of 34 Illinois high schools with enrollments under 500 showed that they had course offerings far exceeding state mandates and were not inefficient when judged by per capita tuition costs and operating expenses.

1985

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Butler, Richard J., Monk, David H. (1985). The Cost of Public Schooling in New York State: The Role of Scale and Efficiency in 1978-79. *The Journal of Human Resources*, v 20, pp 361-381.

Cost differentials between large and small school districts are decomposed into scale and efficiency effects. The analysis shows that scale economies enjoyed by large districts can come at the expense of the efficient production of educational outcomes. Attention is focused on the possible loss of efficiency associated with efforts to increase size by closing schools and consolidating school districts. Empirical evidence from New York State is presented which shows that lower levels of efficiency exist in large compared to small school districts.

1984

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Deaton, Brady J., McNamara, Kevin T. (1984). "Education in a Changing Rural Environment: ... " Southern Rural Development Center, Mississippi State, Miss. (89p)

A synthesis of research findings includes an annotated bibliography for 121 research reports, 1960-1983. Among the findings is a lack of evidence of economies of size for school districts, except for small rural districts.

1982

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Hoachlander, E. Gareth; Choy, Susan P. (1982). "Fiscal Issues Concerning the Reorganization of Los Angeles Unified School District." Evaluative/feasibility report conducted by MPR Associates, under subcontract to Evaluation and Training Institute (ETI)

This report, commissioned by the California Office of the Legislative Analyst, examines the fiscal implications of reorganizing the Los Angeles Unified School District into smaller, independent districts. They concluded that, among other things, LAUSD operates as efficiently as other California districts and does not get a disproportionate share of state revenues and that there are large

differences in expenditure per student within LAUSD, mainly attributable to difference in school size.

Kenny, Lawrence W. (1882). Economies of Scale in Schooling. *Economics of Education Review*, v 2, n 1, pp 1-24.

A model of optimal school size is developed which predicts that schools will minimize total costs by operating in a region of increasing returns to school inputs. The estimates imply sizeable differences in the cost of schooling between urban and rural areas.

1981

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Fox, William F. (1981). Reviewing Economies of Size in Education. *Journal of Education Finance*, v 6, pp 273-296.

Reviews more than 30 studies of size economies in education and concludes, among other things, that the cost curve is usually U-shaped, but all findings must be applied cautiously and with full recognition of the unique characteristics of each place. Different studies with U-shaped curves place optimal school size between 100 and 1800. Optimal district sizes range from 675 to 51,000. Some studies reviewed found no economies of scale and some found constant returns.

Monk, David H.; and others, (1981). "Potential Effects of the Overburden Argument on the Funding of Rural Schools." Final Report to the New York State Special Task Force on Equity and Excellence in Education. Research/technical report.

This report attempts to understand more about how six background characteristics (e.g., small scale, population sparsity, rapid changes in full value property wealth over time, etc.) affect financing and delivery of educational services. The report concludes with a discussion of policy alternatives considered in response to questions, such as, should the state concern itself with the limited extent to which small districts cooperate for the purpose of providing educational services?

"School Size. The Best of ERIC on Educational Management," (Nov 1981). ERIC information analysis. ERIC Clearinghouse on Educational Management, Eugene, Oreg. (ERIC NO: ED210766)

The 11 items in this annotated bibliography are entries in the ERIC system concerning the effects of school size. Nine articles from 1973 to 1981 are summarized. Authors include W. F. Fox and J. W. Guthrie.

1980

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Fox, William F. (1980). Relationships between Size of Schools and School Districts and the Cost of Education. Research report. (33p) ERIC fiche # ED187029



Review of 30 studies of size economies in education. Results suggest that increased size of elementary and secondary schools will permit some limited economies. Degree of savings will depend on other factors, such as the quality of education provided and transportation costs.

1979

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Guthrie, James W. (1979). Organizational Scale and School Success. *Educational Evaluation and Policy Analysis*, v 1, n 1, pp 17-27.

This article reviews recent literature in organizational scale for schools and school districts and points the way for further research. Divides studies into useful categories.

Sabulao, Gloria A. (1979). "Selected Cost-Size Relationships of High School Districts Having One Attendance Center in Illinois". Illinois School Problems Commission, Illinois State University, Normal, Illinois.

Study of the relationships between ADA and costs in 72 Illinois high school districts with only one attendance center. Both linear and curvilinear regression were used. Results indicate that economy can be achieved by eliminating very small high schools.

1964-1978

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Cohn, Elchanan M. (1975). *Economics of Education* . . .

Chapter 8 surveys recent input-output studies and concludes that a U-shaped cost function best describes scale economies for schools and districts. Suggests that substantial research needs to be done in this field.

Barker, Roger G., Gump, Paul V. (1964). *Big School, Small School*. Stanford University Press, Stanford, California.

A classic study which concludes that schools should be small enough that all its students are able to maintain a high level of participation in school activities, i.e., "small enough that students are not redundant".