

**CALCULATION OF THE COST OF A SUITABLE  
EDUCATION IN MONTANA IN 2001-2002 USING  
THE PROFESSIONAL JUDGEMENT APPROACH**

Prepared for

**Montana School Boards Association  
Montana Quality Education Coalition  
Montana Rural Education Association  
Montana Association of School Business Officials  
Montana Association of County School Superintendents**

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## EXECUTIVE SUMMARY

This report concludes a six month study by Augenblick & Myers, Inc. (A&M) on the adequacy of school funding in Montana. The study is designed to determine the funding levels necessary for different school districts to produce a specific level of student performance, or an adequate education, using the professional judgement approach. A&M began work for the Montana School Board Association (MSBA) in February 2002 and conducted three meetings in Billings and Helena between March 2002 and June 2002. A&M, along with representatives of the National Conference of State Legislatures (NCSL), convened these meetings for the purpose of conducting a “professional judgment” adequacy study. In total, 83 Montana citizens with knowledge of education issues contributed to the information contained in this report.

A&M formed a team to complete the work, which included Josiah Petterson and Steve Smith from the National Conference of State Legislatures (NCSL) and John Augenblick, John Myers, Justin Silverstein and Anne Barkis from A&M. Different members of the team spent time in Montana on a number of occasions. Meetings were held in Billings on March 19<sup>th</sup> and 20<sup>th</sup>, 2002, along with meetings in Helena on April 24<sup>th</sup> and April 25<sup>th</sup>, 2002 and June 5<sup>th</sup> and 6<sup>th</sup>, 2002.

The professional judgment approach is a modern version of what used to be called a “resource cost model” or “market-basket” approach that asked educators to specify the resource needs of quality schools. Today, the approach asks educators to identify the resources they feel need to be in place in prototype schools in order for students to achieve a specific set of objectives. Once resources have been specified, prices are determined for the resources which, when applied to the resources, produce a hypothetical cost. Costs for elementary, middle, and high schools can be combined with district level costs to produce an overall cost per student. The district level costs include those expenditures that are in addition to school site expenditures, such as district administration, or those expenditures that cannot be disaggregated to school sites, such as plant maintenance and operation. When undertaken carefully, the approach can be used to distinguish costs of special high-cost programs from basic services, allowing the user to determine a base cost, or foundation level, as well as adjustments to the base.

After looking at both input and output measures, A&M worked with Montana School Boards Association (MSBA) staff and others in Montana to identify what is considered an adequate education for the state. Both input and output measures are needed to describe Montana’s state standard for an adequate education. Appendix A shows how A&M summarized the input measures, suggesting they be used in their entirety, with a special emphasis on resource minimums and course offerings. The output measures focus on the current performance on the Iowa Test of Basic Skills (ITBS) in a number of subject areas and for a number of grade levels. Additionally, we used the new federal requirements in the reauthorization of the Elementary and Secondary Education Act (ESEA), where every student must demonstrate proficiency on state tests by 2013-14. We calculated, based on current test scores, the amount of improvement that is needed in five years to be on target to meet the federal requirement. This means that a district needs a certain percentage of students to be proficient or advanced on the ITBS tests in five years for each test

(Appendix B). These output measures along with the input measures define adequacy in Montana.

A&M decided four prototype districts could be used to represent the diversity in size within the 160 k-12 districts in Montana. Each of the 160 current k-12 districts is represented by one of the four prototypes. We decided to create one prototype elementary district. Even though we recognized the variation in the size of these districts it would not be possible to find the differences in costs between the numerous different small elementary districts. A&M used multiple panels of people for each different size prototype. We used a school level panel that focused exclusively on estimating the resources needed at the prototype school sites. A school district level panel then reviewed the work of the school site panel and estimated the resource needs of the prototype districts. Finally, one “expert” panel reviewed the work of all of the district panels and made choices regarding the price of resources.

The study produced a base cost for each of the five prototype districts: 1) the small k-12 district has a base cost of \$8,041 per pupil; 2) the moderate k-12 district has a base cost of \$6,751 per pupil; 3) the large k -12 district has a base cost of \$6,004 per pupil; 4) the very large k-12 district has a base cost of \$6,048 per pupil; and 5) the elementary district has a base cost of \$6,885 per pupil. These numbers compare to Montana’s average base cost per pupil in 2001 – 2002 of \$4,471. In addition to the base cost amounts, districts would need to spend between \$7,216 and \$8,795 per special education pupil, \$1,774 and \$2,092 per at-risk pupil, and \$1,501 and \$2,010 per Native American pupil. Combining these additional figures with the base costs for the prototypes creates the following average total expenditures per pupil for the prototypes: 1) the small k-12 district has an average total expenditure per pupil of \$9,954; 2) the moderate k-12 district has an average total expenditure per pupil of \$8,992; 3) the large k -12 district has an average total expenditure per pupil of \$7,694; 4) the very large k-12 district has an average total expenditure per pupil of \$7,681; and 5) the elementary district has an average total expenditure per pupil of \$8,720. These numbers compare to the average total expenditure per pupil figure for Montana in 2000 – 2001, as provided to us by MSBA, of \$7,007.

## I. INTRODUCTION

This report is the culmination of a six-month study by Augenblick & Myers, Inc. (A&M) on the adequacy of school funding in Montana. The study was designed to determine the funding levels necessary for different school districts to produce a specific level of student performance, or an adequate education. A&M began work for the Montana School Board Association (MSBA) in February 2002 and conducted three meetings in Billings and Helena between March 2002 and June 2002. A&M, along with representatives of the National Conference of State Legislatures (NCSL), convened these meetings for the purpose of conducting a “professional judgement” adequacy study. In total, 83 Montana citizens with knowledge of education issues contributed to the information contained in this report.

Montana uses a “foundation” formula to distribute most state aid. In an attempt to limit the disparities in expenditures between school districts, an “equalization” component is included in the school funding formula. This “equalization” structure determines a maximum and minimum general fund budget for each school district based on the number of students in a district. Ultimately, disparities between district expenditures should be limited to 25% for similarly sized school districts. Montana school districts’ minimum budget, or BASE budget, must be at least 80% of the maximum. The BASE amount and the maximum budget for each district are adjusted every year to reflect changes in each school district’s enrollment. In 2001-2002, the foundation level, with the “equalization” component, averaged out to be \$4,471, a level that was far less than the average per pupil spending of school districts that year. However, it is difficult to say what the foundation level is supposed to mean. It is a number that is set so that, given the formula, the state allocates as much total support as the state legislature provides. Assuring that the system provides an adequate level of support requires that the foundation level be set at an appropriate level—a level that has some meaning in terms of either the amount of services that can be delivered to students or the level of performance students are able to achieve.

Once a foundation level has been determined, it is common practice among the states to adjust that level in each district so that the revenue amount actually received by a district is sensitive to cost pressures that are beyond its control and that tend to vary across districts. For example, some districts have higher proportions of pupils that participate in special education programs, which may cost much more than regular programs. Districts with relatively higher proportions of pupils in high cost programs will have higher overall costs per student than districts with relatively lower proportions of such pupils, which require that their target revenue levels be higher. Other types of students may also require that districts spend more, such as bilingual students or students who are at-risk of failing in school; these characteristics are strongly associated with the socio-economic characteristics of students’ families. In addition, certain characteristics of school districts,

such as their size or location, may result in relatively higher costs that might require an adjustment in the foundation level in determining a target revenue level.

Montana, like many other states, is implementing a “standards-based” approach as part of an effort to improve student performance. In simple terms, the standards-based approach requires a state to do three things: (1) specify its expectations for student performance; (2) develop procedures to measure how well students are meeting those expectations; and (3) hold providers of education services (school districts, schools, teachers, and so on) accountable for student performance. The logic of the approach implies that a state will assure that sufficient resources are available in all school districts, if not in all schools, so that they can reasonably be expected to meet state standards. In effect, this means that the foundation level should reflect the per pupil spending a district needs to make so that students without special needs can meet state performance expectations.

While many states are pursuing the standards-based approach, most states, including those that use foundation formulas, have not made a concerted effort to assure that the amount of revenue available in school districts is related to the cost of meeting state standards. Although some states have created systems of “rewards” and/or “sanctions” in recognition of student performance, most states have failed to specify how its expectations for student performance might be related to the basic resource needs of school districts. In fact, it is not unusual among the states to see little or no relationship between expected levels of performance and the availability of state aid; conversely, the level of state aid often reflects the availability of money associated with the effort required to obtain it, not the resource needs of pupils, schools, or school districts.

A few states, including Kansas, Illinois, Louisiana, Maryland, Mississippi, New Hampshire, Ohio, Oregon, and Wyoming are attempting to estimate the expenditures school districts need to make in order to fulfill state objectives. Some of these states have been required to review their funding systems as part of school finance litigation while others are doing so as a result of gubernatorial, legislative, or state board of education interest. These states are using calculation procedures based on one of two data-based approaches that have evolved over the past few years: (1) the “professional judgement” model or (2) the “successful school (district)” model. These two approaches are among the four approaches (the other two approaches include one based on the cost of whole-school reform models and one based on statistical analysis of school district performance and expenditure data – neither of which has actually been used by a state, except in one case) that academics and policymakers have been examining in recent years.

The professional judgement approach is a modern version of what used to be called a “resource cost model” or “market-basket” approach that asked educators to specify the resource needs of quality schools. Today, the approach asks educators to identify the resources they feel need to be in place in prototype schools in order for students to achieve



a specific set of objectives. Once resources have been specified, prices are determined for the resources which, when applied to the resources, produce a hypothetical cost. Costs for elementary, middle, and high schools can be combined with district level costs to produce an overall cost per student. The district level costs include those expenditures that are in addition to school site expenditures, such as district administration, or those expenditures that are not commonly disaggregated to school sites, such as plant maintenance and operation. When undertaken carefully, the approach can be used to distinguish costs of special high-cost programs from basic services, allowing the user to determine a base cost, or foundation level, as well as adjustments to the base.

The successful school (district) approach relies on a different logic than the professional judgement approach, seeking to infer a base cost figure from the actual spending of school districts, or schools, determined to be successful because they meet whatever standards are used by a state to evaluate student and school performance. Using this approach, a set of schools or school districts are selected from among all schools or districts that meet a variety of criteria related to their level of success in meeting state standards, their normalcy in terms of socio-economic characteristics such as district wealth or proportion of pupils from low income families, and their efficiency in terms of spending. Once districts have been selected, their basic spending (excluding spending for capital purposes, transportation, special education, other special programs, and any service funded by federal revenue) is examined to determine a base cost level. While this approach is best used to determine a base cost figure, it may be possible to use the approach to determine adjustments to the base cost if a sufficient number of cases can be found with varying levels of special needs to determine the relationship between the proportion of pupils with those needs and the excess spending associated with serving those pupils.

The following chapters will discuss how other states examine issues of adequacy and explain in more detail the professional judgement approach to studying adequacy as it was implemented in Montana.

## II. ALTERNATIVE APPROACHES TO CALCULATING A BASE COST LEVEL

In most states, the base cost figure that drives the foundation program represents a political judgement, reflecting how much revenue is available or how much might become available through higher levels of taxation.<sup>1</sup> In the past few years, some states have begun to develop new approaches to calculating the base cost that are designed to reflect a particular set of services or a particular level of performance, or both, so that the base cost has a meaning beyond simply reflecting available revenue.<sup>2</sup> The effort to develop these approaches is necessitated by the fact that no research exists that demonstrates a straightforward relationship between how much is spent to provide education services and student, school, or school district performance. If such a relationship existed, then state policy-makers could simply determine the level of performance they wanted, and provide the appropriate amount of revenue or, conversely, determine how much revenue was available and know the level of performance that could be attained. In the absence of such a simple relationship, and in light of the fact that some people believe that there is no clear association between spending and performance, four rational approaches have emerged as ways to determine a base cost level: (1) the professional judgement approach; (2) the successful school (district) approach; (3) the comprehensive school reform approach; and

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<sup>1</sup> See "A New Millennium and a Likely New Era of Education Finance" by James W. Guthrie and Richard Rothstein, a chapter in the *2001 Annual Yearbook of the American Education Finance Association* (edited by Stephen Chaikind and William F. Fowler) for a discussion of the history of state attempts to deal with adequacy in the distribution of state aid.

<sup>2</sup> More is being written about the issue of education funding adequacy, including, for example: "Enabling Adequacy to Achieve Reality: Translating Adequacy into State School Finance Distribution Arrangements" by James W. Guthrie and Richard Rothstein in *Equity and Adequacy in Education Finance*, edited by Helen F. Ladd, Rosemary Chalk, and Janet S. Hansen (National Research Council, National Academy press, Washington DC, 1999); "The Empirical Argument for Educational Adequacy, the Critical Gaps in the Knowledge Base, and a Suggested research Agenda" in *Selected Papers in School Finance, 1995* (National Center for Education Statistics, Washington DC, 1997); "Defining Adequacy: Implications for School Business Officials" by Lawrence O. Picus (*School Business Affairs*, January 1999); "The Costs of Sustaining Educational Change Through Comprehensive School Reform" by Allan Odden (*Phi Delta Kappan*, February 2000); "Alternative Approaches to Measuring the Cost of Education" by William Duncombe, John Ruggiero, and John Yinger in *Holding Schools Accountable: Performance-based Reform in Education*, edited by Helen F. Ladd (The Brookings Institution, Washington DC 1996); and "Recommendations for a Base figure and Pupil-Weighted Adjustments to the Base Figure for Use in a New School Finance System in Ohio" by John Augenblick (School Funding Task Force, 1997).

(4) the statistical approach. These approaches differ in terms of underlying philosophy, assumptions, data needs, reliance on research, and ease of understanding. They should not be viewed as competing approaches but, rather, as alternatives that might be appropriate depending on particular circumstances. Moreover, while any of these approaches might be used to calculate a base cost figure, they might be more or less useful in calculating adjustments to the base cost to account for the varying, uncontrollable costs pressures that different districts face.

The professional judgement approach relies on the views of experienced service providers to specify the kinds of resources, and the quantities of those resources, that would be expected to be available in order to achieve a set of objectives specified for the service providers. This contribution-focused approach has been used in Wyoming to calculate a base cost amount in response to the state Supreme Court's requirement that the school finance system reflect the cost of the "basket" of goods and services needed to assure that a high school graduate could be admitted to an institution of higher education in the state. The approach uses a panel of "experts" to specify the way education services should be delivered in prototypical elementary, middle, and high schools, which combine to form a prototype school district.

Once the services have been specified, with a focus on the necessary numbers of different types of personnel, costs are attached and a prototype per pupil cost is determined. This approach best reflects the experiences of people who are actually responsible for delivering education services and may be combined with research results as the basis of a rational way to specify the magnitude of resources that are expected to produce some level of results. As the approach has been implemented, it is designed to distribute funds through a "block grant," without specifying exactly how money should be spent, despite the fact that the prototype schools designate what the experts believe is the best combination of resources. The advantages of the approach are that it reflects the views of actual service providers and it is easy to understand; the disadvantages are that it tends to be based on current practice and there is little evidence that the provision of money at the designated level, or even the deployment of resources as specified by the prototype models, will produce the anticipated outcomes.

The successful school district approach is based on the simple premise that any district should be able to be as successful at meeting a set of objectives as those schools that actually meet those objectives provided that every district has the same level of funding that has been available to the successful districts, and that differences in student characteristics have been taken into consideration. This approach has been used in Mississippi, New Hampshire, and Ohio to establish base cost levels. For example, in Ohio, the average "basic" spending (excluding spending for capital purposes and transportation, expenditures funded by federal revenues, and expenditures for which adjustments would be expected to be calculated) of the districts that met almost all of the state's 18 measurable objectives is the foundation level; in New Hampshire, the approach was modified to include

only those districts that were among the lower spending of those that were within a narrow range of meeting the state's objectives (excluding those that far exceeded the state's objectives). In Mississippi, separate groups of districts were identified to calculate base cost figures for instruction, administration, and plant maintenance and operation, which were then combined to produce a single base cost level.

The successful schools approach is most useful when the state has specified its objectives, and districts can be identified that meet them on the basis of acceptable criteria. The strengths of the approach are that it is based on actual evidence that districts can be successful at a certain resource level and that the ways that resources are used can vary among successful districts; a weakness of the approach is that it makes no adjustments to the base cost to reflect uncontrollable cost pressures, since the characteristics of some districts might differ from those that have been successful.

The comprehensive school reform approach is based on the estimated costs of implementing whole-school, systemic reform models, such as those developed by the New American Schools Development Corporation (NAS). The assumption is that such models reflect the best thinking about how to organize schools to assure their success, particularly with the most difficult students, and that any school that had the same resources as the model school would have the ability to put the model into effect and be equally successful. No state has actually pursued this approach, which may simply reflect the fact that the models are not in widespread use and that they have not had a chance to prove their success yet.

The statistical approach is based on understanding those factors that statistically explain differences in spending across school districts while "controlling" for performance. In some sense, the statistical approach is the most powerful of the alternatives and is subject to the least manipulation. However, it has proven difficult to explain how the approach works in situations other than academic forums. The approach requires the availability of much data, much of which needs to be at the school or student level in order to be most useful. No state has used the statistical approach to determine the parameters in a school finance formula. However, the statistical approach has been used to establish some of the adjustments states use to make the allocation of support sensitive to uncontrollable cost pressures, such as setting the "weights" for students enrolled in special education programs or creating the formulas to reflect the costs associated with different enrollment levels.

None of these approaches are immune to manipulation; that is, each is subject to tinkering on the part of users that might change results. In addition, it is not known at this point whether they would produce similar results if used under the same circumstances (in the same state, at the same time, with similar data). In fact, there is some speculation that the successful school district approach and the comprehensive school reform approach produce lower costs than the professional judgement approach or the statistical approach.

Regardless of these shortcomings, each approach represents an attempt to rationally determine the parameters that drive the allocation of state aid, and the use of any of the approaches raises the level of discussion about school finance adequacy.

### **III. IMPLEMENTING THE PROFESSIONAL JUDGEMENT APPROACH IN MONTANA**

#### Introduction

The professional judgement approach focuses on: (1) the cost of the resources needed for the average student, attending school in the average district, to meet state objectives and (2) the resources required by students with special needs to meet these same objectives. These special needs can include students in special education programs, students who are at-risk of failure, and pupils who are of Native American descent. This approach also can estimate the differences in cost of providing a regular education in districts of varying size.

Using a panel of highly qualified educators, the professional judgement approach identifies the resource needs of prototype elementary, middle, and high schools with a particular set of characteristics within a prototype district. If a state's school districts could be reasonably represented by a set of prototype schools with one set of characteristics, a single panel would get the job done. However, in most states the characteristics of districts, both the size of the districts and type of students the districts serve, varies enough that multiple panels are needed to gain all of the information used in the adequacy study. In Montana, these multiple panels focused on prototype schools and districts of different size.

A&M used multiple panels of people for each different size prototype. We used a school level panel that focused exclusively on estimating the resources needed at the prototype school sites. A school district level panel then reviewed the work of the school site panel and estimated the resource needs of the prototype districts. Finally, one "expert" panel reviewed the work of all of the district panels and made choices regarding the prices of resources.

The remainder of this chapter discusses our work in defining an adequate education, the characteristics of the prototype schools and school districts, the way the panels went about their work, the resource needs of prototype schools and school districts, the prices assigned to those resources, the resulting costs for a variety of resource components, the differing resource costs for school districts of different size, and the level of costs we found for the added costs of special services and the base cost.

#### Defining Adequacy

The first step in an adequacy study is to identify a state's definition of an adequate education. States have held school districts accountable by using two different types of measures. The first measure is input-based. Inputs focus on state requirements for specific types of resources, like the number of teachers, and the course offerings that should be provided to students. The second measure is output driven. Outputs focus on

student performance and are typically associated with statewide assessments. A&M began the process of identifying Montana's definition of an adequate education by looking at what input and output measures currently existed in the state.

Montana has a substantial number of input measures already established. These measures are part of the statewide accreditation system. The state prescribes staffing numbers for a variety of personnel areas that districts must meet. Minimum staffing levels are set based on the number of pupils in a school or the number of students in a classroom. The accreditation system also creates a list of course offerings that must be available in schools. Additionally, Montana has been developing content standards. These content standards identify what must be taught and learned in certain subject areas. At this time, Montana's content standards are not directly measured.

Montana's output measures are not as clearly defined as its input standards. In fact, Montana has no statewide assessment tests. This is not to say that schools do not test in the state, simply that there is no statewide system to assess students on what they have learned related to the content standards. All schools test using a national norm referenced test, the Iowa Test of Basic Skills (ITBS). This test can be used to compare districts throughout the state. Unfortunately, this test is not designed to measure what the state is requiring as inputs, like the course offerings, nor does it measure student achievement on content standards.

After looking at both input and output measures, A&M worked with Montana School Boards Association (MSBA) staff to identify what is considered an adequate education for the state. Both input and output measures are needed to describe Montana's state standard for an adequate education. Appendix A shows how A&M summarized the input measures while suggesting they be used in their entirety, with a special emphasis on resource minimums and course offerings. The output measures are focused on the current performance on the ITBS in a number of subject areas and for a number of grade levels. Under the new federal requirements in the reauthorization of the Elementary and Secondary Education Act (ESEA), every student must demonstrate proficiency on state tests by 2013-14. We calculated, based on current test scores, the amount of improvement that is needed in five years to be on target to meet the federal requirement. This means that a district needs a certain percentage of students to be classified as proficient or advanced on the ITBS tests in five years for each test (Appendix B). For the purpose of this study, these output measures along with the input measures define an adequate education in Montana.

While working to identify Montana's definition of an adequate education, it became clear that school districts were undertaking an unusually large burden in developing content standards and assessment tools to measure student progress on the standards. Typically, there are resources in state agency budgets to support the development of content standards and create good assessments related to those standards. Although, A&M has not reviewed the Montana Office of Public Instruction (OPI) budget, it was reported in the

expert panel discussions that district resources are being used on standards and assessments at a high level in part because of the lack of funding for OPI to provide needed support. The resources identified for the prototype school districts do not fully meet the need for additional resources at the state agency to fulfill its role in standards based reform.

### Determining the Characteristics of Prototype Schools and School Districts

Montana has school districts that are organized in many ways. There are stand-alone elementary districts, stand-alone high school districts, k-12 districts and elementary and high school districts that basically act as k-12 districts. Because of these variances in structure, we felt that it was better to create prototypes using the organization of school systems rather than school districts. Systems are either single districts, such as stand-alone elementary districts and k-12 districts, or two school districts that, other than administration, function as one combined k-12 district. There were 344 systems in Montana for the 2000-2001 school year: 55 k-12 districts, 105 combine districts, 177 elementary districts, and five high school districts.

A&M felt that the majority of our work should focus on those 160 districts that were either k-12 districts or combined districts that function as k-12 districts. We decided to focus on these districts because the vast majority of the students, thus the vast majority of funding, are found in these school districts. Montana's k-12 school districts vary in size from under 50 students to over 15,000 students. In order to better understand the variation in size of the districts we divided them into five groups (quintiles). The first set of quintiles developed was with equal numbers of *school districts* in each of the five groups (Table 1A.) When districts are organized in this manner the 32 districts with the lowest enrollments have only about 2% of the students and an average district size of just 83 students. The 32 districts with the largest enrollments enrolled about 73% of the pupils and had an average district size of just over 3,000 students. The second quintile grouping had an equal number of *students* in each quintile, about 27,300 students per group (Table 1B.) One hundred fifteen districts make up the first group in this set of quintiles while only two districts make up the largest group. Based on this information we decided four prototype districts can be used to represent the diversity in size within the 160 k-12 districts in Montana. Each of the 160 current k-12 districts is represented by one of the four prototypes. The following table, *Characteristics of Actual Montana School Districts by Prototype Group*, show how many districts and students are represented by each of the four prototypes. The characteristics of the prototypes that represent each of the districts can be seen in the table below titled *Characteristics of Elementary, Small, Moderate, Large, and Very Large School Districts in Montana*.

A&M also looked at the characteristics of the elementary districts in Montana. (We did not examine the high school districts since there are only five districts.) Again, we broke the districts up into five groups (quintiles) looking at both equal numbers of districts and



equal numbers of students. Elementary districts varied in size from one student to just over 1,200 students. When you look at equal numbers of *school districts* by quintile, Table 2A, the smallest districts have an average size of just six students while the largest districts averaged 371 students. When you break the 177 districts up into quintiles that are equal groups by number of *students* the smallest group has 139 of 177 districts and an average size of just 25 students. The largest group has just two districts, averaging just over 1,200 students.

**Characteristics of Actual Montana School Districts by Prototype Group**

	<u>Small</u>	<u>Moderate</u>	<u>Large</u>	<u>Very Large</u>
Range of Enrollment	Less than 501	501-1200	1201-3000	3001 and larger
Number of Districts	103	32	18	7
Number of Students	21,078	23,553	31,579	60,315
Average Size of District	205	736	1,754	8,616
Total Number of Schools	321	110	91	112
Average Number of Schools per District	3.1	3.4	5.1	16
Average Size of Schools	66	214	347	539

We decided to create one prototype elementary district, a district of 144 students, whose characteristics are in the table below. Even though we recognized the variation in the size of these districts it would not be possible to find the differences in costs between the numerous different small elementary districts. The differences between a district with two students, 10 students, and 20 students could be great. Given the constraints of this study, it was not feasible to develop the number of prototypes that would have to be examined to look at size adjustments for the smallest elementary districts. Instead, we choose a district that had 144 students to measure if there is a difference in overall cost between a small elementary district and a similarly small k-12 district.

**Characteristics of Prototype Elementary, Small, Moderate, Large,  
and Very Large School Districts in Montana**

	<u>Elementary</u>	<u>Small</u>	<u>Moderate</u>	<u>Large</u>	<u>Very Large</u>
<u>Size of Prototype School</u>					
Elementary School	144	112	200	310	360
Middle School		32	116	270	630
High School		64	232	540	1,300
Size of Prototype School District	144	208	748	1,740	8,450
<u>Proportion of Students in</u>					
Special Education Programs	12%	12%	13%	12%	12%
Proportion of At-Risk Students	37%	37%	40%	35%	24%
<u>Proportion of Native American</u>					
Students	11%	11%	22%	16%	5%
<u>Number and Grade Span of</u>					
<u>Prototype Schools</u>					
Elementary School	1 (K-8)	1 (K-6)	2 (K-6)	3 (K-6)	11 (K-5)
Middle School		1 (7-8)	1 (7-8)	1 (7-8)	3 (6-8)
High School		1 (9-12)	1 (9-12)	1 (9-12)	2 (9-12)
Total Schools	1	3	4	6	16

The table above also shows percentages for special education students, at-risk students, and Native American students. These characteristics were identified because, in general, students with these characteristics tend to need additional resources to meet the state objectives. We used the actual percentages in the k-12 districts that are represented by the four prototypes to reflect the actual differences in districts of the percentage of students who have these characteristics. Special education is a generally accepted added cost factor. The at-risk percentage represents the number of students that are in danger of failing. We used the percentage of students eligible for free and reduced price lunches as a proxy for students at-risk. A&M also felt that Native American students might have added costs associated with meeting their specific needs. We came to this conclusion in discussions with people in Montana as we began our study. Though many of the identified

Native American students may also be identified as at-risk, we asked the panels to identify the added costs only related to the student being Native American. A&M also knows that by using the average percent of Native American students in the representative districts we are not looking at what actually happens in districts in Montana. Often, a district either has a very high percentage of Native American students or a very low percentage.

### The Work of the Professional Judgement Panels

Once we had determined the number of prototype school districts we needed and the characteristics of the schools within those districts we identified the professional panels.

We created five prototype school panels to identify the resource needs of elementary, middle, and high schools in five different size school districts: 1) the small district, 2) the moderate district A, 3) the moderate district B, 4) the large district, and 5) the very large district. We created two moderate size panels that would be building separate prototypes with the same characteristics, because we felt that this size district might be particularly important in our work. The small district panel had the responsibility for building the elementary district during its work. The MSBA took the characteristics of the type of people we needed for each of the five panels and secured the people who would be working on the panels for us (see Appendix C-1). Thirty-five people participated in the school site panel meetings in Billings on March 19<sup>th</sup> and 20<sup>th</sup>. At the meeting, participants were assigned to one of the five panels and given a set of instructions to guide their work (see Appendix D-1). Each panel worked with a staff member from the A&M team who oversaw its work (John Myers, Justin Silverstein, and Anne Barkis from A&M along with Steve Smith and Josiah Petterson from the National Conference of State Legislatures (NCSL)). A reporter was designated for each panel; this person made sure that all the information was recorded on the computer-based collection tools. The panels developed an overall school philosophy and then identified the resources that would be needed to implement this philosophy in order to provide an adequate education. The resources included the number and size of classes, the full extent of the personnel that would be available to students in the school, any opportunities that would be available outside the regular school day such as summer school, equipment amounts, and many other resources. The panels had an added focus of identifying the additional resources that would need to be available to students with special needs to assure they received an adequate education. They reported these added resources separate from the regular education resources. A&M then took the work of each of the five panels and summarized it for review by the prototype school district panels.

Five school district panels met to review the work of the five school site panels. MSBA once again recruited the panel members based on our recommendations of the type of people needed. Forty people participated in the district panels that were held in Helena (see Appendix C-2). Two of the five panels met for a full day on April 24<sup>th</sup>, 2002 and the other three panels met for a full day on April 25<sup>th</sup>, 2002. Justin Silverstein, Anne Barkis, and John Myers oversaw the groups' work. Again, the panel members were given a

set of materials to guide their work (see Appendix D-2) and one participant acted as the recorder. The panels reviewed the work of the school site panels, changed the resource list for the prototype schools where they felt necessary, and created a resource list for central district activities, which had not been identified by the school site panels. A&M then started making some decisions about resource prices and applied them to the resources for the school sites and district costs as identified by the prototype panels.

The expert panel met on June 5<sup>th</sup> and 6<sup>th</sup> in Helena. Again, the MSBA selected the panel members based on A&M's suggestions (see Appendix C-3). The panel reviewed the cost estimates and the resources that had been designated for all six prototype school districts. The panel had a set of instructions (see Appendix D-3) that guided its work and was overseen by John Myers and Justin Silverstein. Panel members had to select one of the two moderate prototypes and then review, and make changes when necessary, to the prototype districts. The expert panel also suggested changes to the prices that would be used to cost out the prototypes.

### The Resource Needs of Schools and School Districts

The figures shown in Tables 4A, 4B, 4C, 4D, and 4E indicate the personnel needs of a prototype elementary school, middle school, and high school based on the work of the professional judgement panels. There are a number of things that need to be kept in mind when looking at these tables. First, the tables show all figures in full-time equivalent (FTE) personnel terms –they reflect the resource needs of schools not necessarily in the way schools may be organized to deliver services. Second, because we wanted to estimate the costs of services for students with special needs, we asked panel members to distinguish, as best they could, the extra resources students with these needs might require. Third, though we asked panel members to be as precise as they could, it would be difficult to show a direct link between certain levels of resources and certain performance expectations. Finally, though we treated every group of students with special needs as a separate group, in reality it is likely that there may be crossover among groups leading to some double counting of resources.

In order to make it easier to compare personnel resources across different schools, Tables 5A, 5B, 5C, and 5D standardize the resources shown in the previously discussed tables by displaying numbers of personnel per 1,000 students. Although we are comparing similar school sites, the grade spans are not always the same. The elementary and middle schools for the very large prototype serve different grade spans than the other prototype districts that serve the same grade spans (see footnote on tables). In the elementary schools, the trend seems to be a decrease in staff per 1,000 students as the schools get larger. This is not true for middle and high schools. The small schools have the highest number of teachers per 1,000 students in both the middle and high schools. Teacher numbers go down dramatically in the moderate middle school, 43.1 per 1,000, then increase to 50.6 per 1,000 in the large and 55.6 per 1,000 in the very large. In high

schools, the moderate sized school district has the second highest teachers per 1,000 at 73.3. The large district dropped to only 59.3 teachers per 1,000 with the very large going up to 62.3 teachers per 1,000. In all districts, there were more teachers per 1,000 students in the high school than in the elementary school. The other personnel categories generally were highest in the small district and then decreased as the size of the district increased. The elementary district, Table 5D, had the highest level of teachers per 1,000 students and had levels similar to the small district in the other categories.

Staffing ratios can also be compared to other states that have used the professional judgement approach. By comparing the results in Montana with the results of other states, we can see if the panels were within a range that is similar to other states. However, there are several caveats that must be acknowledged before looking at these comparisons. First, some of the other states did not use multiple size prototypes; therefore, we chose to compare Montana's large district to the other state's results. Second, every state's measure of adequacy is different. Hence, the amount of resources identified to achieve adequacy could vary.

**SELECTED TYPES OF PERSONNEL PER 1,000 STUDENTS IN FOUR STATES,  
BASED ON THE WORK OF PROFESSIONAL JUDGEMENT PANELS**

**Elementary School**

	<u>Montana</u>	<u>Indiana</u>	<u>Kansas</u>	<u>Maryland</u>
<b><u>Teaching Staff</u></b>				
Classroom Teacher	51.6	56.4	55.0	54.0
Other Teacher	9.7	6.4	12.5	8.0
Total Teachers	61.3	62.8	67.5	62.0
Aide	9.7	--	6.5	--
<b><u>Pupil Support Staff</u></b>				
Guidance Counselor	3.2	2.6	5.0	--
Nurse	1.1	1.3	2.5	2.0
<b><u>Other Staff</u></b>				
Librarian/Media Spec.	3.2	5.1	5.0	2.0
Technology Spec.	3.2	2.6	1.7	4.0
<b><u>Administration</u></b>				
Principal	3.2	2.6	5.0	2.0
Assistant Principal	--	--	--	--
Clerical/Data Entry	4.8	5.1	5.0	8.0

As shown, Montana has the lowest number of total teachers among the four states. At the same time, it has the highest number of aides per 1,000 pupils. When you look at

these two numbers together they trail only Kansas in the total number of instructional personnel per 1,000 students for the elementary district. Montana's pupil support number in elementary school is on par with the other states, though it has the lowest number of nurses. The other staff and administration numbers for Montana are right in line with the other three states.

**SELECTED TYPES OF PERSONNEL PER 1,000 STUDENTS IN FOUR STATES,  
BASED ON THE WORK OF PROFESSIONAL JUDGEMENT PANELS**

**Middle School**

	<u>Montana</u>	<u>Indiana</u>	<u>Kansas</u>	<u>Maryland</u>
<b><u>Teaching Staff</u></b>				
Classroom Teacher	40.7	59.2	46.7	41.3
Other Teacher	9.3	--	16.7	8.8
Total Teachers	50.0	59.2	63.4	50.1
Aide	11.1	--	10.0	--
<b><u>Pupil Support Staff</u></b>				
Guidance Counselor	3.7	6.1	3.3	3.8
Nurse	1.9	2.0	3.3	1.3
<b><u>Other Staff</u></b>				
Librarian/Media Spec.	3.7	4.1	3.3	1.3
Technology Spec.	3.7	2.0	3.3	3.8
<b><u>Administration</u></b>				
Principal	3.7	2.0	3.3	1.3
Assistant Principal	3.7	2.0	3.3	2.5
Clerical/Data Entry	7.4	6.1	8.3	6.3

For middle schools, Montana continues to have a low number of total teachers compared to the other states, specifically Indiana and Kansas. Montana also has the highest number of aides per 1,000 students. Montana's pupil support staff continues to be in line with the other states and its nurse number is more like the other three states. Both the other staff and administration numbers continue to look reasonable in respect to the comparison states.

The high school numbers are the last set of comparisons. These numbers show that the trend of Montana having a low number of total teachers does not continue in the higher grades. Montana trails only Kansas in total numbers of teachers while continuing to have some of the highest number of aides per 1,000 students. The other three groups of personnel are comparable to the numbers of the other three states. Overall, it seems that the Montana panels might have developed prototypes that rely less heavily on teachers than the other states. However, the higher number of teachers per 1,000 at the high school level

might counteract this. Since teacher salaries are the largest part of district budgets this might mean that Montana has created relatively less expensive districts.

**SELECTED TYPES OF PERSONNEL PER 1,000 STUDENTS IN FOUR STATES,  
BASED ON THE WORK OF PROFESSIONAL JUDGEMENT PANELS**

<b>High School</b>				
	<u>Montana</u>	<u>Indiana</u>	<u>Kansas</u>	<u>Maryland</u>
<b><u>Teaching Staff</u></b>				
Classroom Teacher	62.3	43.7	65.0	50.0
Other Teacher	--	16.2	13.8	--
Total Teachers	62.3	59.9	78.8	50.0
Aide	5.0	--	5.0	--
<b><u>Pupil Support Staff</u></b>				
Guidance Counselor	3.8	3.1	5.0	4.0
Nurse	0.5	0.8	2.5	1.0
<b><u>Other Staff</u></b>				
Librarian/Media Spec.	1.5	1.5	2.5	2.0
Technology Spec.	1.5	0.8	2.5	3.0
<b><u>Administration</u></b>				
Principal	0.8	0.8	2.5	1.0
Assistant Principal	2.3	3.1	2.5	3.0
Clerical/Data Entry	4.6	4.6	7.5	5.0

Tables 6A, 6B, 6C, and 6D show the other resources needed in schools, including those associated with professional development, instructional supplies and materials, equipment, technology, assessment, and co-curricular/student activities. After reviewing the work of the other panels, the expert panel found that there were similarities in how professional development was treated in the six prototypes. However, it determined that professional development needed to be consistent across all of the prototype districts. It decided that all certified personnel, who are not on year round contracts, would receive an additional eight days of contract time in order to undertake professional development. Classified personnel would receive three additional contract days for professional development. Likewise, the panel found similarities in how supplies and materials were handled but felt costs would be the same in all of the districts except the small and elementary districts where an additional \$50 would be given per pupil at each school type. The expert panel used a similar consistency approach when looking at a number of other cost areas. Equipment costs varied by school type but were the same for all of the districts. Technology and assessment costs were the same across school types and

districts. Co-curricular/student activities varied in cost for school types, the highest costs in high school, but were the same amount for every district in elementary and middle school. There was a difference in cost between the small and moderate costs per pupil for co-curricular/student activities and the large and very large districts. The panel felt that in order to provide similar opportunities for high school students in the different districts it would cost more per student in the smaller districts.

We asked the panels to separately identify resources that are associated with programs that either have not traditionally been provided in Montana schools or that are generally provided outside the normal school day or school year. Tables 7A and 7B indicate which services should be provided in each district at what level for what type of students. Again, the expert panel brought consistency to the work of the district panels. It felt that any program that would seem to be necessary in one size district would most likely be needed in all of the districts. Using this assumption it identified five programs that would be offered in every district. Pre-school programs would be offered to both at-risk pupils and special education pupils. The same groups would be offered summer school programs. Full-day kindergarten would be offered to all pupils in all districts. An extended day program would be offered to at-risk students to focus on helping them reach the standards. Finally, 10% of students would be served in gifted and talented programs.

### Resource Prices

Several steps were taken to decide on the prices of personnel to use for this study. First, we needed to identify numbers that represented the real price of personnel, not just what they are currently being paid. Second, we wanted to identify specific prices for as many personnel types as possible. Finally, we wanted to differentiate prices based on real differences in costs to different types of districts. Montana presented a challenge in doing all of these things. The state does not routinely collect average salary data for education personnel nor do any of the local education groups such as the MSBA. We had to find other methods to determine the personnel prices.

In order to find the real price for personnel, A&M looked at the price of teachers in surrounding states, those states that would be considered to be in the same labor market for personnel. We compared the salaries of Idaho, North Dakota, South Dakota, and Wyoming. In order to compare the current average salaries between the states, we adjusted each of the states salaries by a set of factors to be equal to Montana. We adjusted for cost of living differences between the states, years of experience, and education level of teachers. When Montana is compared to the four states, after making the adjustments, it has a slightly lower than average teacher salary.

The expert panel expressed concerns that Montana is both losing new teachers and retirees to other states. A&M had no way to determine what the cost impact of this is on Montana districts. We did feel that one state, where the expert panel felt that Montana



loses some of its personnel, Washington, should be added to the comparables list since it basically borders Montana. With Washington added, Montana's average teacher salary is 4.4% below the average of the five comparable states (see Table 8). Given our discussions with all the panels combined with the difference in average salary to the comparables, we adjusted salaries by the 4.4% figure. A&M believes that more work should be done to examine if teachers are leaving the state either for their first job or as they approach retirement age and if so what the cost to the state would be to stop the trend.

As mentioned above Montana does not collect average salaries for different personnel types in education. Since we could not get the salaries for the different types of personnel, we used a salary survey put together by MSBA. MSBA asked all of the 160 k-12 districts to report their average salaries for a wide range of personnel positions, including teachers, instructional aides, guidance counselors, and various district personnel. MSBA felt that it received a good response rate to the survey. A&M decided that this was useful salary information and that it would also allow us to differentiate prices for the different size prototypes. The original survey results for the different prototypes are in Appendix E. Instead of using the actual numbers from the survey, since they did not represent all of the districts, we used them in conjunction with other information we had collected to derive the final resource prices, as described below.

First, we took an average teacher salary figure for the whole state that MSBA was able to provide to us for the 1999-2000 school year. We adjusted this number for two years of inflation (3.4% for 2000-2001 school year and 2.8% for the 2001-2002 school year) and then for the 4.4% increase we agreed upon to adjust for the labor market forces. Next, we compiled the survey results by the four k-12 prototype school size grouping districts. We calculated the average teacher salary for each of the four groups. We compared the newly calculated average teacher salary for each group to the average teacher salary for all of the districts that participated in the MSBA survey. Then, we determined how much, as a percent, higher or lower the groups average teacher salary was to the complete group of districts surveyed. Finally, we applied that percentage to the average teacher salary provided by the MSBA for the 1999-2000 school year to create an adjusted average teacher salary for each of the four groups.

Once we had the average teacher salary for each of the four groups we applied the same ratio to the average teacher salary for each personnel salary as existed from the original survey information. That is to say that if the average superintendent salary was 20% more than the average teacher salary on the survey it would continue to be 20% more than the adjusted average teacher salary. The final resource prices used for personnel are shown on Table 9.

The benefit rate we used is 30%. This figure is based on our work with the expert panel. It includes the cost of health benefits but not necessarily the increase in those costs

that either has happened in the last several months or is expected to happen in the near future. A benefit rate of 16% was used for the professional development days that were added on. This represents the costs to the district that accrue on every added dollar paid such as social security. It does not include the cost of health care since the full cost of it is paid under the regular contract. The expert panel also determined the rate for substitute teachers. It set the rate at \$75 per day.

## Prototype Cost Estimates

### *School Level Costs*

Tables 10A, 10B, 10C, 10D, and 11 show the prototype costs that result from applying the prices discussed above to the resources specified by the professional judgement panels. Per pupil figures were calculated for all pupils and for pupils with special needs by multiplying numbers of resources (such as personnel) by prices and dividing either by the number of students in each prototype school or by the number of students with a particular special need.

We divided the information on the tables into two categories: 1) figures related to base spending – that is spending for all students that cannot be disaggregated for students with special needs; and 2) figures related to spending for students with special needs, which are disaggregated by specific need. Within the first category, we divided figures into basic programs (which includes a basic cost that reflects personnel, annually consumed supplies and materials, and ancillary school based costs), professional development, technology, and other programs. The second category shows the basic costs in each special needs area along with the costs of other programs targeted to the special needs students. For all figures school level costs are shown and then combine costs across levels to calculate a district-wide figure based on the statewide average distribution of students in elementary schools, middle schools, and high schools. These percentages vary between the different prototypes due to the varying make up of grade levels in school types. The percents used for each prototype are listed at the bottom of the Tables 10A, 10B, 10C, 10D, and 11.

Looking at the data for a small school district (Table 10A), the per pupil basic cost rises dramatically as you go up in grade level. The elementary school base spending is \$4,636, it rises to \$6,688 in middle school and the high school basic cost is \$7,810. This means that it is 68% more expensive to serve the basic needs of a high school student than an elementary student in the small district. Once you combine the figures, based on the statewide percentages, the basic figure for the small district is \$5,967. The statewide percentages used for the four k-12 prototypes differ due to different grade spans within the prototype schools. Combining professional development costs would be an additional \$168 per pupil and the cost of full day kindergarten, when spread across all students in the small district, would be \$97 per pupil. The cost of special education would include a base cost of

\$8,284 per special education pupil with additional costs of \$149 per special education pupil for the pre-school program and \$16 per special education pupil for the summer school program. Similarly, the school site costs for at-risk students would include a base cost and some additional program costs. The total of these costs would be \$1,775 per at-risk student. Although there are costs associated with Native American students at the school site, for this study the expert panel felt that the costs of providing services to Native American students should be identified at the district level.

Though the basic cost figures for the larger k-12 school districts (Tables 10B, 10C, and 10D) have similar trends to those in the small school district, the percentage difference between the basic costs figures for elementary and high school is generally much lower. The one exception is in the moderate district where the elementary basic cost is higher than the middle but still much lower than the high school basic cost. There seems to be no trend in terms of cost per special education pupil. The costs range from bases of over \$8,200 per pupil to as low as \$5,079 per special education pupil. The base costs per at-risk student is much more stable. The only difference is in the very large district due to the different grade structures in schools.

The elementary district, Table 11, shows costs that look different from the four k-12 prototype school districts. The difference can be attributed to it only being a k-8 elementary building in the district. The basic cost is very similar to that seen in the elementary schools from the four other prototypes. The special education costs are in the middle of those seen in the k-12 districts. At-risk costs are lower because they are only for elementary students who had the lowest overall cost. Overall, costs seem to be lower in this district than for the k-12 districts.

### *District Level Costs*

The figures discussed above are school level costs to which district level spending needs to be added in order to get to both a full basic cost and the full cost of programs for students with special needs. Full cost figures for the four prototype k-12 districts are shown in Table 12 and the full cost figures for the elementary district are shown in Table 13. In Table 12, administrative costs go down as the district gets larger. The district costs are broken down into three areas: 1) administration –costs associated with personnel who work to facilitate the providing of instruction in the district; 2) plant maintenance and operations – costs associated with the operation and up keep of facilities; and 3) other costs –all costs that do not fit into the other areas. The small district's district administrative costs are over twice those of the very large district on a per pupil basis. The plant maintenance and operations numbers are basically the same for the four districts, the only exception is the very large district where the different grade spans account for an eight dollar per pupil higher cost. Other costs generally decrease as the size of the district increases.

The numbers for the special needs students in the k-12 districts does not show the same pattern as those for the basic costs. The special education costs at the district vary widely. They are as high as \$2,314 for the large district to as low as \$915 for the very large district. Understanding these differences can be difficult. Some panels might have districts allocating more resources to the school site and do not need as many resources at the district level for special education students. The opposite might also be true; districts might allocate a majority of its resources at the district level rather than at the school site. Below we will look at the combined school and district spending for special education, which will show the full differences in spending across the districts. The Native American spending has a direct relationship to the total basic spending, both at the school site and district level, for each of the four districts. The expert panel felt that there should be a constant adjustment of 25% of the base for Native American students. It felt the money should go to the district so that they could decide how best to serve its mix of students. There were no additional costs for the at-risk students at the district level. The expert panel felt that the resources were fully accounted for at the school site.

The elementary district, shown in Table 13, has some different characteristics than the four k-12 districts. The elementary districts administrative costs per pupil is by far the highest number of all of the districts. On the other hand it has the lowest plant maintenance and operations number, this is due to the formula the expert panel used to identify this cost, it assigned the lowest costs to the lowest grades. The other costs are a little below the smallest district and above the other three districts. The district level special education costs are far below any of the k-12 districts. Again, the Native American costs simply reflect 25% of the total base cost.

### *Total Spending*

The bottom sections of Tables 12 and 13 show the combined school site and district level spending for each of the districts. Again, Table 12 shows the four k-12 prototype school districts. The total base cost figures are highest in the smallest district and go down to the lowest at the large district with a slight raise in the very large district. This shows a trend that is not uncommon in school finance and is associated with the diseconomies of scale in the larger school districts. The numbers are close enough in our study that they may just represent some impreciseness in the professional judgement approach. Once combined, the special education figures become much more consistent than when looking at only the school site or district costs. The only district that does not look similar is the large district; where costs per special education pupil are about \$1,500 less than the other k-12 districts. The at-risk costs are the same numbers seen at the school site and continue to be relatively consistent. Native American costs are the same as those seen at the district level and simply represent 25% of the total base cost line.

The elementary school districts combined costs are shown on the lower half of Table 13. The districts total base cost is only lower than the small district, while the total special

education costs are only higher than the large district. At-risk costs and Native American costs simply reflect numbers already seen on either Table 11 or Table 13.

The last line of numbers on both Tables 12 and 13 represent the average total expenditure per pupil in the prototype school districts. This is simply the total spending for all students, including the cost of serving students with special needs, divided by the total enrollment of the prototype district. It allows someone to compare districts in a different manner. What it does not take into account is the difference in populations between districts, which might have an impact on overall costs. The average total expenditure numbers are highest in the small district and decrease as the size of the district increases. The elementary district average total expenditure is lower than the small and moderate districts average total expenditure and higher than the large and very large districts.

### Comparing Professional Judgement Figures to Actual Expenditures

We can now compare the total base cost figures and the average total expenditure figures for the five districts to what is currently true in Montana. In 2001-2002, the average base cost per pupil in Montana was \$4,471. This compares to base costs for the prototypes of \$8,041 for small, \$6,751 for moderate, \$6,004 for large, \$6,048 for very large, and \$6,885 for the elementary district. Montana's average expenditure per pupil, using a number provided by the MSBA, was \$7,007. In contrast, the prototype districts had average expenditures per pupil of \$9,954 for small, \$8,992 for moderate, \$7,694 for large, \$7,681 for very large and \$8,720 for elementary. The work of the professional judgement panels in Montana resulted in a level of funding need to assure students success that exceeds the current funding level. The numbers represent work done by experienced educators working to tie the needs of students to resources.

**TABLE 1A**

**CHARACTERISTICS OF K-12\* SCHOOL DISTRICTS IN  
MONTANA FOR “EQUAL DISTRICT” QUINTILES OF  
DISTRICTS BASED ON NUMBER OF DISTRICTS**

<u>Quintile Characteristics</u>	<u>District Enrollment Quintile</u>				
	<u>Quintile 1</u> up to 113 stu	<u>Quintile 2</u> 114-228	<u>Quintile 3</u> 229-429	<u>Quintile 4</u> 430-909	<u>Quintile 5</u> over 909 stu.
Number of Districts	32	32	32	32	32
Number of Students	2,799	5,250	9,770	19,569	99,137
Average Size of Districts	87 stu.	164 stu.	305 stu.	612 stu.	3,098 stu.
<u>Proportion of Students:</u>					
In Special Education	11%	12%	12%	13%	12%
Eligible for Free/Reduced Price Lunch	42%	41%	35%	39%	28%
Native American	5%	11%	12%	18%	10%

\* For the purposes of this display, all actual K-12 districts and all districts operating as K-12 districts (in terms of the flow of students) are included.

**TABLE 1B**

**CHARACTERISTICS OF K-12\* SCHOOL DISTRICTS IN MONTANA FOR “EQUAL STUDENT” QUINTILES OF DISTRICTS BASED ON DISTRICT ENROLLMENT**

<u>Quintile Characteristics</u>	<u>District Enrollment Quintile</u>				
	<u>Quintile 1</u> up to 604 stu.	<u>Quintile 2</u> 605-1,596	<u>Quintile 3</u> 1,597-5,086	<u>Quintile 4</u> 5,087-11,888	<u>Quintile 5</u> over 11,888 stu.
Number of Districts	115	27	12	4	2
Number of Students	27,827	27,021	26,206	27,892	27,579
Average Size of Districts	242 stu.	1,001 stu.	2,184 stu.	6,973 stu.	13,790 stu.
<u>Proportion of Students:</u>					
In Special Education	12%	13%	12%	12%	13%
Eligible for Free/Reduced Price Lunch	39%	36%	33%	22%	26%
Native American	15%	15%	15%	4%	7%

\* For the purposes of this display, all actual K-12 districts and all districts operating as K-12 districts (in terms of the flow of students) are included.

**TABLE 2A**

**CHARACTERISTICS OF ELEMENTARY SCHOOL DISTRICTS  
IN MONTANA FOR “EQUAL DISTRICT” QUINTILES OF  
DISTRICTS BASED ON NUMBER OF DISTRICTS**

<u>Quintile Characteristics</u>	<u>District Enrollment Quintile</u>				
	<u>Quintile 1</u> up to 6 stu.	<u>Quintile 2</u> 7-14 stu.	<u>Quintile 3</u> 15-38 stu.	<u>Quintile 4</u> 39-126 stu.	<u>Quintile 5</u> over 126 stu.
Number of Districts	36	37	34	35	35
Number of Students	140	396	805	2,498	12,968
Average Size of Districts	4 stu.	11 stu.	24 stu.	71 stu.	371 stu.
<u>Proportion of Students:</u>					
In Special Education	11%	14%	13%	14%	13%
Eligible for Free/Reduced Price Lunch	1%	22%	12%	33%	32%
Native American	1%	3%	3%	9%	34%



**TABLE 2B**

**CHARACTERISTICS OF ELEMENTARY SCHOOL DISTRICTS  
IN MONTANA FOR “EQUAL STUDENT” QUINTILES OF  
DISTRICTS BASED ON DISTRICT ENROLLMENT**

<u>Quintile Characteristics</u>	<u>District Enrollment Quintile</u>				
	<u>Quintile 1</u> up to 116 stu.	<u>Quintile 2</u> 117-228	<u>Quintile 3</u> 229-535	<u>Quintile 4</u> 536-1,154	<u>Quintile 5</u> over 1,154 stu.
Number of Districts	139	20	11	5	2
Number of Students	3,476	3,256	3,768	3,848	2,459
Average Size of Districts	25 stu.	163 stu.	343 stu.	770 stu.	1,230 stu.
<u>Proportion of Students:</u>					
In Special Education	14%	13%	12%	12%	14%
Eligible for Free/Reduced Price Lunch	27%	31%	22%	39%	39%
Native American	7%	5%	2%	3%	46%

**TABLE 3A**

**CHARACTERISTICS OF K-12 PROTOTYPE  
SCHOOLS BY SIZE OF SCHOOL DISTRICT**

	Level of School		
	Elementary	Middle	High School
<u>Schools in Small School Districts</u>			
Enrollment	112	32	64
Grade Span	K-6	7-8	9-12
% in Special Education	12%	12%	12%
% Eligible for Free/ Reduced Price Lunch	37%	37%	37%
% Native American Students	11%	11%	11%
<u>Schools in Moderate Size School Districts</u>			
Enrollment	200	116	232
Grade Span	K-6	7-8	9-12
% in Special Education	13%	13%	13%
% Eligible for Free/ Reduced Price Lunch	40%	40%	40%
% Native American Students	22%	22%	22%
<u>Schools in Large Districts</u>			
Enrollment	310	270	540
Grade Span	K-6	7-8	9-12
% in Special Education	12%	12%	12%
% Eligible for Free/ Reduced Price Lunch	35%	35%	35%
% Native American Students	16%	16%	16%
<u>Schools in Very Large Districts</u>			
Enrollment	360	630	1,300
Grade Span	K-5	6-8	9-12
% in Special Education	12%	12%	12%
% Eligible for Free/ Reduced Price Lunch	24%	24%	24%
% Native American Students	5%	5%	5%

**TABLE 3B**

**CHARACTERISTICS OF ELEMENTARY  
PROTOTYPE SCHOOL DISTRICT**

Enrollment	144
Grade Span	K-8
% in Special Education	12%
% Eligible for Free/ Reduced Price Lunch	37%
% Native American Students	11%

TABLE 4A

PERSONNEL REQUIREMENTS OF K-12 PROTOTYPE  
SCHOOLS TO ACHIEVE DESIRED RESULTS  
GIVEN SPECIFIED SCHOOL CHARACTERISTICS

*Small School District*

	<u>Elementary School</u>	<u>Middle School</u>	<u>High School</u>
<u>Specified Characteristics</u>			
Enrollment	112	32	64
Number of Students in Special Education	13	4	8
Number of at-risk Students	41	12	24
Number of Native American Students	12	4	7
<u>Personnel</u>			
(1) <u>Teaching Staff</u>			
<i>Regular Student</i>			
Classroom Teacher	6.50	2.00	5.57
Other Teacher	1.50	1.00	1.44
Aide	1.00	0.50	.25
<i>Special Education</i>			
Classroom Teacher	1.00	.25	.50
Other Teacher	0.30	-	-
Aide	1.00	.50	1.00
(2) <u>Pupil Support Staff</u>			
<i>Regular Student</i>			
Guidance Counselor	.50	.20	.50

**TABLE 4A (Continued)**

	<u>Elementary School</u>	<u>Middle School</u>	<u>High School</u>
<u>Personnel (Continued)</u>			
(2) <u>Pupil Support Staff (Continued)</u>			
<i>Special Education</i>			
Psychologist	.20	.10	.20
Speech Pathologist	.40	.10	.10
(3) <u>Other Staff</u>			
<i>All Students</i>			
Librarian/Media Specialist	.50	.25	.75
Technology Specialist	.50	.20	.50
Substitutes	\$8,100	\$3,105	\$7,434
(4) <u>Administration</u>			
<i>All Students</i>			
Principal	.50	.25	.75
Clerical/Data	1.00	.50	.50

Note: Additional staff not shown in this table may be available although they are counted at the district level.

**TABLE 4B**

**PERSONNEL REQUIREMENTS OF K-12 PROTOTYPE  
SCHOOLS TO ACHIEVE DESIRED RESULTS  
GIVEN SPECIFIED SCHOOL CHARACTERISTICS**

*Moderate Size School District*

<u>Specified Characteristics</u>	<u>Elementary School</u>	<u>Middle School</u>	<u>High School</u>
Enrollment	200	116	232
Number of Students in Special Education	26	15	30
Number of at-risk Students	80	46	93
Number of Native American Students	44	26	51
 <u>Personnel</u>			
(1) <u>Teaching Staff</u>			
<i>Regular Student</i>			
Classroom Teacher	11.00	4.00	10.25
Other Teacher	2.00	1.00	6.75
Aide	2.00	1.00	2.50
<i>Special Education</i>			
Classroom Teacher	1.00	1.00	2.00
Aide	3.00	2.00	2.00
(2) <u>Pupil Support Staff</u>			
<i>Regular Student</i>			
Guidance Counselor	.50	.50	.50
Nurse	.25	.25	.25
<i>Special Education</i>			
Psychologist	.20	.20	.20
Speech Pathologist	.33	.20	.20

**TABLE 4B (Continued)**

	<u>Elementary School</u>	<u>Middle School</u>	<u>High School</u>
<u>Personnel (Continued)</u>			
(3) <u>Other Staff</u>			
<i>All Students</i>			
Librarian/Media Specialist	.50	.50	1.00
Technology Specialist	.70	.30	-
Substitutes	\$12,600	\$5,400	\$15,750
(4) <u>Administration</u>			
<i>All Students</i>			
Principal	1.00	.50	1.00
Assistant Principal	-	.25	.50
Clerical/Data	1.00	1.00	1.50

Note: Additional staff not shown in this table may be available although they are counted at the district level.

**TABLE 4C**

**PERSONNEL REQUIREMENTS OF K-12 PROTOTYPE  
SCHOOLS TO ACHIEVE DESIRED RESULTS  
GIVEN SPECIFIED SCHOOL CHARACTERISTICS**

*Large School District*

	<u>Elementary School</u>	<u>Middle School</u>	<u>High School</u>
<u>Specified Characteristics</u>			
Enrollment	310	270	540
Number of Students in Special Education	37	32	65
Number of at-risk Students	109	95	189
Number of Native American Students	50	43	86
<u>Personnel</u>			
(1) <u>Teaching Staff</u>			
<i>Regular Student</i>			
Classroom Teacher	16.00	11.00	32.00
Other Teacher	3.00	2.50	-
Aide	3.00	3.00	2.50
<i>Special Education</i>			
Classroom Teacher	2.00	2.00	6.50
Other Teacher	-	-	-
Aide	2.00	2.00	4.00
(2) <u>Pupil Support Staff</u>			
<i>Regular Student</i>			
Guidance Counselor	1.00	1.00	2.50
Nurse	.33	.50	.33
Psychologist	.10	.10	.10



**TABLE 4C (Continued)**

	<u>Elementary School</u>	<u>Middle School</u>	<u>High School</u>
<u>Personnel (Continued)</u>			
(2) <u>Pupil Support Staff (Continued)</u>			
<i>Special Education</i>			
Psychologist	.23	.23	.23
(3) <u>Other Staff</u>			
<i>All Students</i>			
Librarian/Media Specialist	1.00	1.00	1.50
Technology Specialist	1.00	1.00	1.50
Substitutes	\$18,900	\$13,950	\$32,850
(4) <u>Administration</u>			
<i>All Students</i>			
Principal	1.00	1.00	1.00
Assistant Principal	-	1.00	1.00
Clerical/Data	1.50	2.00	3.00

Note: Additional staff not shown in this table may be available although they are counted at the district level.

**TABLE 4D**

**PERSONNEL REQUIREMENTS OF K-12 PROTOTYPE  
SCHOOLS TO ACHIEVE DESIRED RESULTS  
GIVEN SPECIFIED SCHOOL CHARACTERISTICS**

*Very Large School District*

	<u>Elementary School</u>	<u>Middle School</u>	<u>High School</u>
<u>Specified Characteristics</u>			
Enrollment	360	630	1,300
Number of Students in Special Education	43	76	156
Number of at-risk Students	86	151	312
Number of Native American Students	18	32	65
<u>Personnel</u>			
(1) <u>Teaching Staff</u>			
<i>Regular Student</i>			
Classroom Teacher	17.00	25.00	81.00
Other Teacher	3.00	10.00	-
Aide	3.50	6.00	6.50
<i>Special Education</i>			
Classroom Teacher	3.20	5.00	10.00
Other Teacher	-	1.28	2.00
Aide	4.00	7.00	14.00
(2) <u>Pupil Support Staff</u>			
<i>Regular Student</i>			
Guidance Counselor	1.00	2.00	5.00
Nurse	.20	.32	.67
Psychologist	.10	.20	.25

**TABLE 4D (Continued)**

	<u>Elementary School</u>	<u>Middle School</u>	<u>High School</u>
<u>Personnel (Continued)</u>			
(2) <u>Pupil Support Staff (Continued)</u>			
<i>Special Education</i>			
Nurse	.10	.18	.33
Psychologist	.23	.50	.75
(3) <u>Other Staff</u>			
<i>All Students</i>			
Librarian/Media Specialist	1.00	1.50	2.00
Technology Specialist	1.00	1.00	2.00
Substitutes	\$19,800	\$34,650	\$79,200
(4) <u>Administration</u>			
<i>All Students</i>			
Principal	1.00	1.00	1.00
Assistant Principal	-	1.50	3.00
Clerical/Data	1.50	3.00	6.00

Note: Additional staff not shown in this table may be available although they are counted at the district level.

**TABLE 4E**

**PERSONNEL REQUIREMENTS OF PROTOTYPE  
SCHOOLS IN AN ELEMENTARY SCHOOL  
DISTRICT TO ACHIEVE DESIRED RESULTS  
GIVEN SPECIFIED SCHOOL CHARACTERISTICS**

	K-8 <u>School</u>
<u>Specified Characteristics</u>	
Enrollment	144
Number of Students in Special Education	17
Number of at risk	53
Number of Native American Students	16
 <u>Personnel</u>	
(1) <u>Teaching Staff</u>	
<i>Regular Student</i>	
Classroom Teacher	8.50
Other Teacher	2.70
<i>Special Education</i>	
Classroom Teacher	1.00
Other Teacher	.30
Aide	1.00
(2) <u>Pupil Support Staff</u>	
<i>Regular Student</i>	
Guidance Counselor	.50
<i>Special Education</i>	
Psychologist	.20
Speech Pathologist	.40

## TABLE 4E (Continued)

K-8  
School

### Personnel (Continued)

(3) Other Staff

*All Students*

Librarian/Media Specialist	1.00
Library aide	.50
Technology Specialist	.50
Substitutes	\$11,430

(4) Administration

*All Students*

Principal	.50
Clerical/Data	1.00

**TABLE 5A**

**PERSONNEL PER 1,000 STUDENTS FOR SELECTED TYPES  
OF PERSONNEL SERVING REGULAR STUDENTS OR ALL  
STUDENTS FOR SCHOOLS IN K-12 SCHOOL DISTRICTS  
BY SCHOOL DISTRICT SIZE BASED ON THE WORK  
OF THE PROFESSIONAL JUDGEMENT PANELS**

**Elementary School**

	Size of School District			
	<u>Small</u>	<u>Moderate</u>	<u>Large</u>	<u>Very Large</u>
(1) <u>Teaching Staff</u>				
Classroom Teacher	58.0	55.0	51.6	47.2
Other Teacher	13.4	10.0	9.7	8.3
Aide	8.9	10.0	9.7	9.7
(2) <u>Pupil Support Staff</u>				
Guidance Counselor	4.5	2.5	3.2	2.7
Nurse	.*	1.3	1.1	.6
(3) <u>Other Staff</u>				
Librarian/Media Spec.	4.5	2.5	3.2	2.7
Technology Spec.	4.5	3.5	3.2	2.7
(4) <u>Administration</u>				
Principal	4.5	5.0	3.2	2.7
Clerical/Data	8.9	5.0	4.8	4.2

\* Not assigned at the school level but counted at the district level.

Note: Schools in the small, moderate, and large size districts are grades K-6 while schools in the very large district are grades K-5.

**TABLE 5B**

**PERSONNEL PER 1,000 STUDENTS FOR SELECTED TYPES  
OF PERSONNEL SERVING REGULAR STUDENTS OR ALL  
STUDENTS FOR SCHOOLS IN K-12 SCHOOL DISTRICTS  
BY SCHOOL DISTRICT SIZE BASED ON THE WORK  
OF THE PROFESSIONAL JUDGEMENT PANELS**

**Middle School**

	Size of School District			
	<u>Small</u>	<u>Moderate</u>	<u>Large</u>	<u>Very Large</u>
(1) <u>Teaching Staff</u>				
Classroom Teacher	62.5	34.5	40.7	39.7
Other Teacher	31.3	8.6	9.3	15.9
Aide	15.6	8.6	11.1	9.5
(2) <u>Pupil Support Staff</u>				
Guidance Counselor	6.3	4.3	3.7	3.2
Nurse	.*	2.2	1.9	.5
(3) <u>Other Staff</u>				
Librarian/Media Spec.	7.8	4.3	3.7	2.4
Technology Spec.	6.3	2.6	3.7	1.6
(4) <u>Administration</u>				
Principal	7.8	4.3	3.7	1.6
Asst. Principal	-	2.2	3.7	2.4
Clerical/Data	5.6	8.6	7.4	4.8

\* Not assigned at the school level but counted at the district level.

Note: Schools in the small, moderate, and large size districts are grades 7-8 while schools in the very large district are grades 6-8.

**TABLE 5C**

**PERSONNEL PER 1,000 STUDENTS FOR SELECTED TYPES  
OF PERSONNEL SERVING REGULAR STUDENTS OR ALL  
STUDENTS FOR SCHOOLS IN K-12 SCHOOL DISTRICTS  
BY SCHOOL DISTRICT SIZE BASED ON THE WORK  
OF THE PROFESSIONAL JUDGEMENT PANELS**

**High School**

	Size of School District			
	<u>Small</u>	<u>Moderate</u>	<u>Large</u>	<u>Very Large</u>
(1) <u>Teaching Staff</u>				
Classroom Teacher	87.0	44.2	59.3	62.3
Other Teacher	22.5	29.1	-	-
Aide	3.9	10.8	4.6	5.0
(2) <u>Pupil Support Staff</u>				
Guidance Counselor	7.8	2.2	4.6	3.8
Nurse	.*	1.1	.6	.5
(3) <u>Other Staff</u>				
Librarian/Media Spec.	11.7	4.3	2.8	1.5
Technology Spec.	7.8	-	2.8	1.5
(4) <u>Administration</u>				
Principal	11.7	4.3	1.9	.8
Asst. Principal	-	2.2	1.9	2.3
Clerical/Data	7.8	6.5	5.6	4.6

\* Not assigned at the school level but counted at the district level.



## TABLE 5D

### PERSONNEL PER 1,000 STUDENTS FOR SELECTED TYPES OF PERSONNEL SERVING REGULAR STUDENTS OR ALL STUDENTS FOR SCHOOLS IN ELEMENTARY SCHOOL DISTRICTS BASED ON THE WORK OF THE PROFESSIONAL JUDGEMENT PANELS

#### K-8 School

(1) <u>Teaching Staff</u>	
Classroom Teacher	59.0
Other Teacher	18.8
(2) <u>Pupil Support Staff</u>	
Guidance Counselor	3.5
(3) <u>Other Staff</u>	
Librarian/Media Spec.	6.9
Technology Spec.	3.5
(4) <u>Administration</u>	
Principal	3.5
Clerical/Data	6.9

**TABLE 6A**

**OTHER NON-PERSONNEL COSTS TO OPERATE PROTOTYPE  
SCHOOLS IN K-12 DISTRICTS OF DIFFERENT SIZE BASED ON THE  
WORK OF THE PROFESSIONAL JUDGEMENT PANELS**

**Elementary School**

	Size of School District			
	<u>Small</u>	<u>Moderate</u>	<u>Large</u>	<u>Very Large</u>
(1) <u>Professional Development</u>				
Time	8 days cert. 3 days class.	8 days cert. 3 days class.	8 days cert. 3 days class.	8 days cert. 3 days class.
(2) Instructional Supplies/Materials	\$250/pup.	\$200/pup.	\$200/pup.	\$200/pup.
(3) Equipment	\$50/pup.	\$50/pup.	\$50/pup.	\$50/pup.
(4) Technology	\$275/pup.	\$275/pup.	\$275/pup.	\$275/pup.
(5) Assessment	\$20/pup.	\$20/pup.	\$20/pup.	\$20/pup.
(6) Co-curricular/ Student Activities	\$50/pup.	\$50/pup.	\$50/pup.	\$50/pup.

Note: Cert. is Certified staff and Class. is Classified staff.

**TABLE 6B**

**OTHER NON-PERSONNEL COSTS TO OPERATE PROTOTYPE  
SCHOOLS IN K-12 DISTRICTS OF DIFFERENT SIZE BASED ON THE  
WORK OF THE PROFESSIONAL JUDGEMENT PANELS**

**Middle School**

	Size of School District			
	<u>Small</u>	<u>Moderate</u>	<u>Large</u>	<u>Very Large</u>
(1) <u>Professional Development</u>				
Time	8 days cert. 3 days class.	8 days cert. 3 days class.	8 days cert. 3 days class.	8 days cert. 3 days class.
(2) Instructional Supplies/Materials	\$250/pup.	\$200/pup.	\$200/pup.	\$200/pup.
(3) Equipment	\$150/pup.	\$150/pup.	\$150/pup.	\$150/pup.
(4) Technology	\$275/pup.	\$275/pup.	\$275/pup.	\$275/pup.
(5) Assessment	\$20/pup.	\$20/pup.	\$20/pup.	\$20/pup.
(6) Co-curricular/ Student Activities	\$250/pup.	\$250/pup.	\$250/pup.	\$250/pup.

Note: Cert. is certified staff and class. is classified staff.

**TABLE 6C**

**OTHER NON-PERSONNEL COSTS TO OPERATE PROTOTYPE  
SCHOOLS IN K-12 DISTRICTS OF DIFFERENT SIZE BASED ON THE  
WORK OF THE PROFESSIONAL JUDGEMENT PANELS**

**High School**

	Size of School District			
	<u>Small</u>	<u>Moderate</u>	<u>Large</u>	<u>Very Large</u>
(1) Professional <u>Development</u>				
Time	8 days cert. 3 days class.	8 days cert. 3 days class.	8 days cert. 3 days class.	8 days cert. 3 days class.
(2) Instructional Supplies/Materials	\$300/pup.	\$250/pup.	\$250/pup.	\$250/pup.
(3) Equipment	\$150/pup.	\$150/pup.	\$150/pup.	\$150/pup.
(4) Technology	\$275/pup.	\$275/pup.	\$275/pup.	\$275/pup.
(5) Assessment	\$20/pup.	\$20/pup.	\$20/pup.	\$20/pup.
(6) Co-curricular Activities/Student Activities	\$600/pup.	\$600/pup.	\$450/pup.	\$450/pup.

\* Cert. is certified staff and class. is classified staff.

## TABLE 6D

### OTHER NON-PERSONNEL COSTS TO OPERATE PROTOTYPE SCHOOLS IN ELEMENTARY DISTRICTS BASED ON THE WORK OF THE PROFESSIONAL JUDGEMENT PANELS

#### K-8 School

(1) Professional  
Development

Time

8 days cert.  
3 days class.

(2) Instructional  
Supplies/Materials

\$250/pup.

(3) Equipment

\$50/pup.

(4) Technology

\$275/pup.

(5) Assessment

\$20/pup.

(6) Co-curricular/Student  
Activities

\$50/pup.

Note: Cert. is certified staff and class. is classified staff.

**TABLE 7A**

**OTHER PROGRAMS INCLUDED AS RESOURCE  
NEEDS OF PROTOTYPE SCHOOLS IN K-12 SCHOOL  
DISTRICTS BY SCHOOL DISTRICT SIZE BASED ON THE  
WORK OF THE PROFESSIONAL JUDGEMENT PANELS**

	Size of School District			
	<u>Small</u>	<u>Moderate</u>	<u>Large</u>	<u>Very Large</u>
<u>Elementary School</u>				
(1) <u>Pre-School</u>				
All Students	-	-	-	-
Special Education	X	X	X	X
At-Risk Students	X	X	X	X
(2) <u>Full-Day Kindergarten</u>				
All Students	X	X	X	X
At-Risk Students	-	-	-	-
(3) <u>Gifted &amp; Talented</u>				
All Students	X	X	X	X
At-Risk Students	-	-	-	-
(4) <u>Extended-Day</u>				
All Students	-	-	-	-
At-Risk Students	X	X	X	X
(5) <u>Summer Programs</u>				
All Students	-	-	-	-
Special Education	X	X	X	X
At-Risk Students	X	X	X	X

**TABLE 7A (Continued)**

	Size of School District			
	<u>Small</u>	<u>Average</u>	<u>Large</u>	<u>Very Large</u>
<u>Middle School</u>				
(1) <u>Gifted &amp; Talented</u>				
All Students	X	X	X	X
At-Risk Students	-	-	-	-
(2) <u>Extended-Day</u>				
All Students	-	-	-	-
At-Risk Students	X	X	X	X
(3) <u>Summer Programs</u>				
All Students	-	-	-	-
Special Education	X	X	X	X
At-Risk Students	X	X	X	X
<u>High School</u>				
(1) <u>Gifted &amp; Talented</u>				
All Students	X	X	X	X
At-Risk Students	-	-	-	-
(2) <u>Extended-Day</u>				
All Students	-	-	-	-
At-Risk Students	X	X	X	X
(3) <u>Summer Programs</u>				
All Students	-	-	-	-
Special Education	X	X	X	X
At-Risk Students	X	X	X	X

## TABLE 7B

### OTHER PROGRAMS INCLUDED AS RESOURCE NEEDS OF PROTOTYPE SCHOOLS IN ELEMENTARY SCHOOL DISTRICTS BASED ON THE WORK OF THE PROFESSIONAL JUDGEMENT PANELS

#### K-8 School

#### Elementary School

(1) <u>Pre-School</u>		
All Students	-	
Special Education	X	
At-Risk Students	X	
(2) <u>Full-Day Kindergarten</u>		
All Students	X	
At-Risk Students	-	
(3) <u>Gifted &amp; Talented</u>		
All Students	X	
At-Risk Students	-	
(4) <u>Extended-Day</u>		
All Students	-	
At-Risk Students	X	
(5) <u>Summer Programs</u>		
All Students	-	
Special Education	X	
At-Risk Students	X	



**TABLE 8**

**COMPARISON OF 1998-99 STATEWIDE AVERAGE TEACHER SALARY IN MONTANA TO NEIGHBORING/COMPETING STATES**

<u>State</u>	(1) 1998-99 Average Teacher Salary	(2) Relative Cost of of Living (COL)	(3) Salary Adjusted for COL*	(4) 1993-94 % Teachers with More than B.A.	(5) Educ. Adjust. Factor (EAF)**	(6) Salary Adjusted for COL and EAF	(7) 1993-94 Average Years of Exper.	(8) Exper. Adjust. Factor (XAF)***	(9) Salary Adjusted COL, EAF and XAF
<b>Montana</b>	<b>\$32,930</b>	<b>96.7</b>	<b>\$32,930</b>	<b>28.3%</b>	<b>1.0283</b>	<b>\$32,930</b>	<b>13</b>	<b>1.26</b>	<b>\$32,930</b>
Idaho	\$36,375	96.1	\$36,602	24.9%	1.0249	\$36,723	12	1.24	\$37,315
North Dakota	\$30,891	94.2	\$31,711	19.8%	1.0198	\$31,975	13	1.26	\$31,975
South Dakota	\$30,265	89.6	\$32,663	24.8%	1.0248	\$32,775	14	1.28	\$32,263
Washington	\$42,101	104.6	\$38,921	42.1%	1.0421	\$38,406	14	1.28	\$37,806
Wyoming	\$34,188	100.2	\$32,995	28.3%	1.0283	\$32,995	14	1.28	\$32,479

\* Salary adjusted for COL [column 3] is calculated by multiplying the unadjusted salary [column (1)] by the ratio of Montana's COL (96.7) to each comparison state's COL [column (2)].

\*\* The education adjustment factor (EAF) is calculated by expressing the proportion of teachers with more than a B.A. [column (4)] as a decimal, dividing by 10, and adding the product to 1.000. Each state's adjusted salary [column (6)] is the salary in column (3) multiplied by the ratio of Montana's EAF (1.0283) divided by each comparison state's EAF [column (5)].

\*\*\* The experience adjustment factor (XAF) is calculated by multiplying the number of years of experience [column (7)] by .02 and adding the product to 1.00. Each state's adjusted salary [column (9)] is the salary in column (6) multiplied by the ratio of Montana's XAF (1.26) divided by each comparison state's XAF [column (8)].

Sources: National Center for Education Statistics, Digest of Education Statistics, 2000 (salary, Table 76, education and experience, Table 69). American Federation of Teachers (interstate cost-of-living adjustment for 1998).

**TABLE 9****PRICES FOR PROTOTYPE RESOURCE ELEMENTS  
AND COMPONENTS BY SIZE OF SCHOOL DISTRICT**

<u>Resource Element</u>	<u>Size of District</u>			
	<u>Small</u>	<u>Moderate</u>	<u>Large</u>	<u>Very Large</u>
<b>(1) Salary Levels (2001-2002)</b>				
Classroom Teacher*	\$31,412	\$35,947	\$34,925	\$38,293
Other Tchr./Schl.-Home Coord.*	\$31,412	\$35,947	\$34,925	\$38,293
Librarians/Media Specialist	\$31,412	\$35,947	\$34,925	\$38,293
Technology Specialist	\$34,395	\$32,731	\$28,861	\$34,552
Guidance Counselor	\$35,076	\$42,224	\$36,585	\$44,335
Nurse	\$28,474	\$28,472	\$40,104	\$30,993
Psychologist	\$32,634	\$41,618	\$39,949	\$44,287
Para-Professional/Aide	\$17,436	\$18,419	\$18,220	\$16,765
Spch./Occ./Phys. Therapist	\$42,930	\$41,695	\$37,340	-
Clerical/Data	\$19,922	\$23,772	\$20,434	\$21,422
Principal	\$44,372	\$56,700	\$59,292	\$65,618
Assistant Principal	\$51,241	\$54,922	\$52,928	\$63,545
Superintendent	\$72,022	\$70,521	\$74,121	\$92,725
Assistant Superintendent	-	-	\$70,293	\$79,827
Assess/Curriculum	-	\$55,141	\$70,293	\$67,379
Business Manager	\$28,569	\$39,868	\$46,213	\$72,015
Technology Coordinator	-	\$39,706	\$41,480	\$52,515

(2) Substitutes = \$75 a day

(3) Personnel Salary Benefit Rate = 30% of salary

(4) Professional Development = The cost of one day of a person's salary, assuming a 187 day contract year. This daily rate is then increased by 16 percent to account for added benefits.

\* These figures include a 4.9 percent adjustment above the statewide average.

**TABLE 10A**

**SCHOOL LEVEL COSTS FOR K-12 SCHOOL DISTRICTS OF DIFFERENT SIZE BASED ON THE WORK OF THE PROTOTYPE PANELS**

	<b>Small School District</b>			
	<u>Elementary School</u>	<u>Middle School</u>	<u>High School</u>	<u>Combined</u>
<b>(1) <u>Base Spending*</u></b>				
Basic**	\$4,636	\$6,688	\$7,810	\$5,967
Prof. Devel.	\$135	\$184	\$212	\$168
Technology	\$275	\$275	\$275	\$275
<b><u>Other Programs</u></b>				
Full-Day Kindergarten	\$186	-	-	\$97
Gifted & Talented	\$52	\$70	\$83	\$65
<b>(2) <u>Additional Spending for Special Student Populations***</u></b>				
<b><u>Special Educ. (12%)</u></b>				
Base	\$8,733	\$8,311	\$7,543	\$8,284
Pre-school	\$288	-	-	\$149
Summer	\$15	****	\$25	\$16
<b><u>At-Risk (37%)</u></b>				
Base	\$1,000	\$1,500	\$2,000	\$1,401
After School	\$54	\$68	\$49	\$55
Pre-School	\$509	-	-	\$264
Summer	\$54	\$68	\$49	\$55

\* Costs are shown per all pupils in a school.

\*\* Basic base spending includes school level personnel salaries and benefits, supplies and materials, assessment, and other expenditures.

\*\*\* Costs are shown per pupil with the indicated need (special education or at-risk).

\*\*\*\* Rounding results in no cost appearing although the service is provided.

Note: Combined figures are based on statewide proportions of students: elementary school, 51.8%, middle school, 16.3%, and high school, 31.9%.

**TABLE 10B**

**SCHOOL LEVEL COSTS FOR K-12 SCHOOL DISTRICTS OF DIFFERENT SIZE BASED ON THE WORK OF THE PROTOTYPE PANELS**

**Moderate Size School District**

	<u>Elementary School</u>	<u>Middle School</u>	<u>High School</u>	<u>Combined</u>
<b>(1) <u>Base Spending*</u></b>				
Basic**	\$4,692	\$4,147	\$5,718	\$4,939
Prof. Devel.	\$134	\$102	\$147	\$133
Technology	\$275	\$275	\$275	\$275
<b><u>Other Programs</u></b>				
Full-Day Kindergarten	\$171	-	-	\$89
Gifted & Talented	\$53	\$46	\$61	\$54
<b>(2) <u>Additional Spending for Special Student Populations***</u></b>				
<b><u>Special Educ. (13%)</u></b>				
Base	\$6,880	\$8,265	\$6,550	\$7,001
Pre-school	\$433	-	-	\$224
Summer	\$23	\$22	\$20	\$23
<b><u>At-Risk (40%)</u></b>				
Base	\$1,000	\$1,500	\$2,000	\$1,401
After School	\$47	\$70	\$53	\$53
Pre-school	\$611	-	-	\$316
Summer	\$47	\$70	\$53	\$53

\* Costs are shown per all pupils in a school.

\*\* Basic base spending includes school level personnel salaries and benefits, supplies and materials, assessment, and other expenditures.

\*\*\* Costs are shown per pupil with the indicated need (special education or at-risk).

Note: Combined figures are based on statewide proportions of students:  
elementary school, 51.8%, middle school, 16.3%, and high school, 31.9%.

**TABLE 10C**

**SCHOOL LEVEL COSTS FOR K-12 SCHOOL DISTRICTS OF DIFFERENT SIZE BASED ON THE WORK OF THE PROTOTYPE PANELS**

**Large School District**

	<u>Elementary School</u>	<u>Middle School</u>	<u>High School</u>	<u>Combined</u>
<b>(1) <u>Base Spending*</u></b>				
Basic**	\$4,263	\$4,286	\$4,683	\$4,401
Prof. Devel.	\$126	\$110	\$123	\$122
Technology	\$275	\$275	\$275	\$275
<b><u>Other Programs</u></b>				
Full-Day Kindergarten	\$169	-	-	\$87
Gifted & Talented	\$48	\$47	\$51	\$49
<b>(2) <u>Additional Spending for Special Student Populations***</u></b>				
<b><u>Special Educ. (12%)</u></b>				
Base	\$4,223	\$4,882	\$6,569	\$5,079
Pre-school	\$405	-	-	\$210
Summer	\$22	\$19	\$22	\$21
<b><u>At-Risk (35%)</u></b>				
Base	\$1,000	\$1,500	\$2,000	\$1,401
After School	\$62	\$75	\$60	\$64
Pre-School	\$545	-	-	\$282
Summer	\$62	\$75	\$60	\$64

\* Costs are shown per all pupils in a school.

\*\* Basic base spending includes school level personnel salaries and benefits, supplies and materials, assessment, and other expenditures.

\*\*\* Costs are shown per pupil with the indicated need (special education or at-risk).

Note: Combined figures are based on statewide proportions of students:  
elementary school, 51.8%, middle school, 16.3%, and high school, 31.9%.

**TABLE 10D**

**SCHOOL LEVEL COSTS FOR K-12 SCHOOL DISTRICTS OF DIFFERENT SIZE BASED ON THE WORK OF THE PROTOTYPE PANELS**

**Very Large School District**

	<u>Elementary School</u>	<u>Middle School</u>	<u>High School</u>	<u>Combined</u>
<b>(1) <u>Base Spending*</u></b>				
Basic**	\$4,167	\$4,596	\$4,888	\$4,500
Prof. Devel.	\$124	\$125	\$133	\$127
Technology	\$275	\$275	\$275	\$275
<b><u>Other Programs</u></b>				
Full-Day Kindergarten	\$434	-	-	\$191
Gifted & Talented	\$50	\$50	\$53	\$51
<b>(2) <u>Additional Spending for Special Student Populations***</u></b>				
<b><u>Special Educ. (12%)</u></b>				
Base	\$6,377	\$6,862	\$10,057	\$7,668
Pre-school	\$436	-	-	\$192
Summer	\$19	\$21	\$21	\$20
<b><u>At-Risk (24%)</u></b>				
Base	\$1,000	\$1,500	\$2,000	\$1,440
After School	\$100	\$122	\$96	\$104
Pre-School	\$1,011	-	-	\$445
Summer	\$100	\$122	\$96	\$104

\* Costs are shown per all pupils in a school.

\*\* Basic base spending includes school level personnel salaries and benefits, supplies and materials, assessment, and other expenditures.

\*\*\* Costs are shown per pupil with the indicated need (special education or at-risk).

Note: Combined figures are based on statewide proportions of students:  
elementary school, 44.0%, middle school, 24.1%, and high school, 31.9%.

**TABLE 11**

**SCHOOL LEVEL COSTS FOR ELEMENTARY  
SCHOOL DISTRICTS BASED ON THE  
WORK OF THE PROTOTYPE PANELS**

	<u>K-8 School</u>
<b>(1) <u>Base Spending*</u></b>	
Basic**	\$4,681
Prof. Devel.	\$144
Technology	\$275
 <b><u>Other Programs</u></b>	
Kindergarten	\$145
Gifted/Talented	\$51
 <b>(2) <u>Spending for Special Student Populations***</u></b>	
<b><u>Special Educ. (16%)</u></b>	
Base	\$6,678
Pre-K	\$441
Summer	\$31
 <b><u>At-Risk Students (16%)</u></b>	
Base	\$1,000
Summer	\$60
Extended-Day	\$60
Pre-K	\$787

\* Costs are shown per all pupils in a school.

\*\* Basic base spending includes school level personnel salaries and benefits, supplies and materials, assessment, and other expenditures.

\*\*\* Costs are shown per all pupils with the indicated special need (not just those served by the specified program).

TABLE 12

**DISTRICT LEVEL COSTS AND TOTAL COSTS\* FOR  
K-12 SCHOOL DISTRICTS OF VARYING SIZE BASED  
ON THE WORK OF THE PROTOTYPE PANELS**

	Size of School District			
	<u>Small</u>	<u>Moderate</u>	<u>Large</u>	<u>Very Large</u>
(1) <u>District Level Spending</u>				
Administration**	\$589	\$526	\$320	\$234
Plant M&O**	\$572	\$573	\$573	\$580
Vocational Education**	-	-	-	\$33
Other**	\$292	\$171	\$176	\$88
<u>Special Need Students</u>				
Special Education***	\$940	\$1,389	\$2,314	\$915
Native American***	\$2,010	\$1,688	\$1,501	\$1,512
(2) <u>Total Spending</u>				
<u>Base Spending**</u>				
School Level	\$6,587	\$5,481	\$4,935	\$5,112
District Level	\$1,454	\$1,270	\$1,069	\$936
<b>Total Base Cost</b>	<b>\$8,041</b>	<b>\$6,751</b>	<b>\$6,004</b>	<b>\$6,048</b>
<u>Added Cost of Special Needs Students***</u>				
Special Education	\$8,630	\$8,776	\$7,216	\$8,795
At-Risk	\$1,774	\$1,822	\$1,810	\$2,092
Native American	\$2,010	\$1,688	\$1,501	\$1,512
<b>AVERAGE TOTAL EXPENDITURES</b>	<b>\$9,954</b>	<b>\$8,992</b>	<b>\$7,694</b>	<b>\$7,681</b>



## TABLE 12 (Continued)

- \* All figures exclude expenditures for transportation and capital outlay.
- \*\* Costs are per all pupils.
- \*\*\* Costs are per pupil with the special needs identified.

TABLE 13

**DISTRICT LEVEL COSTS AND TOTAL COSTS\* FOR  
ELEMENTARY SCHOOL DISTRICTS BASED ON  
THE WORK OF THE PROTOTYPE PANELS**

	<u>K-8 School</u>
(1) <u>District Level Spending</u>	
Administration**	\$808
Plant M&O**	\$507
Other**	\$273
<u>Special Need Students</u>	
Special Education***	\$682
<u>Other Services</u>	
Native American***	\$1,721
(2) <u>Total Spending</u>	
<u>Base Spending**</u>	
School Level	\$5,296
District Level	\$1,589
<b>Total Base Cost</b>	<b>\$6,885</b>
Added Cost of Special <u>Needs Students***</u>	
Special Education	\$7,832
At-Risk	\$1,907
Native American	\$1,721
<b>AVERAGE TOTAL EXPENDITURES</b>	<b>\$8,720</b>

\* All figures exclude expenditures for transportation and capital outlay.

\*\* Costs are per all pupils.

\*\*\* Costs are per pupil with the special needs identified.

## **Appendix A Accreditation Standards**

### **Montana State Constitution**

Article X, Section 1: (1) It is the goal of the people to establish a system of education, which will develop the full educational potential of each person. Equality of educational opportunity is guaranteed to each person of the state.

(2) The state recognizes the distinct and unique cultural heritage of the American Indians and is committed in its educational goals to the preservation of their cultural integrity.

(3) The legislature shall provide a basic system of free quality public elementary and secondary schools. The legislature may provide such other educational institutions, public libraries, and educational programs as it deems desirable. It shall fund and distribute in an equitable manner to the school districts the state's share of the cost of the basic elementary and secondary school system.

### *Staffing Ratios*

Administrative Personnel: .5 FTE for schools with 9-17 certified staff;  
1 FTE for schools with 18-29 certified staff or 250-550 students  
2 FTE for schools with 551-1050 students;  
3 FTE for schools with 1051-1550 students;  
4 FTE for schools with 1551-2050 students; and  
5 FTE for schools with 2051 or more students.

Library Media Services: Districts with fewer than 125 students shall employ or contract with a certified, endorsed school library media specialist, or seek alternative ways to provide library media services, using certified personnel.

.5 FTE for schools with 126-250 students;  
1 FTE for schools with 251-500 students;  
1.5 FTE for schools with 501-1000 students;  
2 FTE for schools with 1001-1500 students;  
2.5 FTE for schools with 1501-2000 students;  
3 FTE for schools with 2001 or more students.

Guidance Staff: Minimum of 1 FTE counselor for 400 elementary (K-8) students, and minimum of 1 FTE for 400 high school students. Counselor/student ratio shall be prorated. Districts with less than 125 students shall employ or contract with a certified guidance specialist, or seek alternative ways to provide guidance services.

### Class Size:

*Elementary:* No more than 20 students in kindergarten and grades 1 and 2;  
No more than 28 students in grades 3 and 4;  
No more than 30 students in grades 5 through 8;  
In multi-grade classrooms, the maximum class size shall be:  
No more than 20 students in grades K, 1, 2, and 3;  
No more than 24 students in grades 4, 5, and 6;

## Appendix A (continued)

### Class Size (continued):

#### *Elementary:*

No more than 26 students in grades 7 and 8.

Multi-grade classrooms that cross grade-level boundaries shall use the maximum of the lower grade.

In one-teacher schools, the maximum class size shall be 18 students.

Instructional aides are mandatory when class size exceeds the standards, assigned at a minimum of 1 ½ hours per day, per student overload, up to six hours.

#### *Junior High/Middle School and High School:*

Individual class size shall not exceed 30 students.

Class size limits do not apply to instrumental music or choral programs.

The number of students assigned to a teacher per day shall not exceed 150.

Teachers with a significant writing program shall have a maximum load of 100 students.

### Academic Requirements:

*Middle School Program:* Visual arts (art history, art criticism, aesthetic perception and production); English/Language Arts (literature, language study, reading, writing, listening and speaking); Health Enhancement (health and physical education); Social Studies; Mathematics (written and mental computation and problem solving); Music (general, instrumental, vocal); Science (basic science incorporating physical and life science); Vocational/Practical Arts (agriculture, business education, home economics, industrial marketing); Second Language; Exploratory Courses (creative writing, dance, drama, photography).

*7<sup>th</sup> and 8<sup>th</sup> Grade Program:* English/Language Arts (one unit each year to each grade level); Social Studies (one unit each year to each grade level); Mathematics (one unit each year to each grade level); Science (one unit each year to each grade level); Health Enhancement (one-half unit each year to each grade level); Music (one-half level each year to each grade level); Second language (one-half unit each year to each grade level); Visual arts (one-half unit each year to each grade level); Vocational/Practical Arts (one-half unit each year to each grade level).

#### *High School: (Basic Education Program Offerings):*

4 Units of English/Language Arts;

3 Units of Mathematics;

3 Units of Science;

3 Units of Social Studies;

2 Units of Vocational/Technical Education;

2 Units of Arts;

1 Unit of Health Enhancement;

2 Units of World Languages; and

2 Units of Electives.

## **Appendix A (continued)**

Students must complete 20 of these 22 units to meet graduation requirements. A unit of credit is defined as the equivalent of at least 225 minutes per week for one year.

In addition, each program shall meet all of the Program Content Standards as defined by Chapter 54 of the Montana School Accreditation Standards and Procedures Manual.

**Appendix B**  
**Montana Statewide Assessment Results 2000-2001**

	Proficient and Advanced	Goal*
<b>Fourth Grade</b>		
Reading	79%	88%
Math	73%	84%
Language Arts	76%	86%
Science	82%	90%
Social Studies	78%	87%
<b>Eighth Grade</b>		
Reading	73%	84%
Math	69%	82%
Language Arts	71%	83%
Science	78%	87%
Social Studies	73%	84%
<b>Eleventh Grade</b>		
Reading	78%	87%
Math	76%	86%
Language Arts	77%	87%
Science	81%	89%
Social Studies	81%	89%

\* Represents for school districts where student achievement needs to be in five years time.

## Appendix C-1 Prototype School Site Panel Members

<u>Name of Individual</u>	<u>Position</u>	<u>School District</u>
David Spence	K-8 Teacher	Seely Lake Elem.
Wanda Grinde	K-8 Teacher	Canyon Creek Elem.
Oscar Cantu	High School Teacher	Winifred
Steve Hamel	Clerk/Business Manager	Chester
Cheryl Johannes	Elementary Principal	Anderson SD
George Rider	High School Principal	Scobey
Diane Fladmo	Special Ed. Director	Prairie View Coop.
Margaret Bowles	Elementary Teacher	Townsend
Patricia Toavs	Middle School Teacher	Wolf Point
Wade Nelson	High School Teacher	Thompson Falls
Teresa Cornell	Clerk/Business Manager	Harlem
Keith Obert	Elementary Principal	East Helena
Joette Speak	Curriculum Director	Colstrip
		Gallatin/Madison
Ron Laferriere	Special Ed. Director	Cooperative
Kathy Sessions	Elementary Teacher	Choteau
Michael Smith	Middle School Teacher	Huntley
Diane Elliott	High School Teacher	Poplar
Kim Hiwalker	Clerk/Business Manager	Lame Deer
Bob Moore	Principal	Manhattan
Diane Knudson	Curriculum Director	Gold Triangle Coop.
Sue Paulson	Special Ed. Director	Evergreen
Tom Anderson	Elementary Teacher	Hamilton
Ron Kimmet	Middle School Teacher	Hardin
Alexandra Startin	High School Teacher	Columbia Falls
Stacey Vestal	Clerk/Business Manager	Lewistown
Rick Rafter	High School Principal	Polson
William Hickey	Special Ed. Director	Anaconda
Marilyn LaSorte	Curriculum Director	Columbia Falls
Patty Myers	Elementary Teacher	Great Falls
Patricia Bauerle	Middle School Teacher	Bozeman
Dave Hamilton	High School Teacher	Missoula
Kim Harris	Clerk/Business Manager	Helena
Ralph Thayer	Principal	Billings
Dan Zorn	Curriculum	Kalispell
Denise Conrad	Special Education Director	Great Falls

## Appendix C-2 School District Panel Members

<u>Name of Individual</u>	<u>Position</u>	<u>School District</u>
Don Bouchard	Teacher	Fairview
Gary Griffith	Trustee	Monforton
Frank Dengel	Trustee	Grass Range
Paul Huber	Superintendent	Bainville
Mike Magone	Superintendent	Target Range
Donna Maddux	County Superintendent	Flathead County
Beth Gerhart	Principal	Belt
Betty Brumwell	Business Manager	Dutton
Laurie Lay	Teacher	Red Lodge
Charles Wilson	Trustee	Glasgow
Melanie Symons	Trustee	East Helena
Ramona Stout	Superintendent	Manhattan
Dennis Roseleip	Superintendent	Cut Bank
Mike Williams	Superintendent	Lame Deer
Dave Shreeve	Principal	Colstrip
Bill Schiele	Business Manager	Stevensville
Colleen Torgerson	Teacher	Somers
Art Anderson	Trustee	Cut Bank
Jim Foster	Trustee	Townsend
Melinda Berkham	Superintendent	Dillon
Steve Gaub	Superintendent	Florence
Kurt Hilliard	Superintendent	Conrad
Tina Lynch	Principal	Red Lodge
Patty Muir	Teacher	Laurel
Tonia Bloom	Trustee	Corvallis
Barb Riley	Trustee	C. Falls
Dick Cameron	Superintendent	Glendive
Bob Voth	Superintendent	Ronan
Verna Beiffert	Superintendent	Livingston
Lee Hazelbaker	Principal	Belgrade
Danelle Reisch	Business Manager	Whitefish
Curt Prchal	Teacher	Billings
Stevie Schmitz	Trustee	Billings
Julie Mitchell	Trustee	Helena
Bryan Dunn	Superintendent	Great Falls
Harry Amend	Superintendent	Kalispell
Mike Redburn	Superintendent	Bozeman
Cheryl Wilson	Principal	Missoula
Todd Watkins	Business Manager	Kalispell



**Appendix C-3  
Expert Panel Members**

**Name of Individual**

Judi Woodhouse

Joan Schmidt

John McNeil

Kirk Miller

Bruce Messinger

Steve Johnson

Roger Heimbigner

Rachel Vellieux

**Position**

Teacher

Trustee

Superintendent

Superintendent

Superintendent

Business Manager

Business Manager

County Superintendent

**School District**

Polson

Fairfield

Savage

Havre

Helena

Bozeman

Laurel

Missoula County

## **Appendix D-1**

### **Instructions to Professional Judgement School Site Panel Members**

March 2002  
Billings, MT

1. You are a member of one of five panels of people that is being asked to design a set of prototype schools C a prototype elementary school, a prototype middle school, and/or a prototype high school. The prototype schools are hypothetical C they do not actually exist and they may never be created. They are a convenient way to specify the resources that schools with a particular set of characteristics should have in order to accomplish a specific set of objectives.
2. Five prototype panels will be working today and tomorrow. Two panels will focus on schools in a moderate size school district. One panel will focus on schools in a small district. One panel will focus on schools in a large district. One panel will focus on schools in a very large school district.
3. Each group should identify someone as a recorder for the group. The recorder will be asked to fill out forms on the computer provided to the group
4. The characteristics of the prototype schools are shown on a separate page. The characteristics that define the schools include their enrollment, grade span, the proportion of pupils with special education needs, the proportion of pupils from low-income families (eligible for free/reduced price meals), and the proportion of Native American students.
5. The objectives that need to be accomplished by the prototype schools are shown on a separate page. The objectives can be described broadly as either education opportunities/programs/services or as levels of education performance. See the separate document that shows how well districts are doing now.
6. In designing the prototype, we need you to provide some very specific information so that we can calculate the cost of the resources needed to meet the objectives identified above. The fact that we need that information should not constrain you in any way in designing the program of a prototype school. Your job is to create a set of programs/curriculums designed to serve students with particular needs in such a way that the objectives specified above are fulfilled. Use your experience and expertise to organize personnel, supplies and materials, and technology in any way you feel confident will produce the desired outcomes.
7. You can make certain assumptions about the prototype schools and the environment in which they exist. These assumptions may not characterize the school, or the school district, in which you work and we will devote some time to discussing the assumptions after you have completed your work.

Teachers: You should assume that you can attract and retain qualified personnel and that you can employ people on a part-time basis if needed (based on tenths of a full-time equivalent person).

Facilities: You should assume that the prototype school has sufficient space to meet the requirements of the program you design.

Revenues: You should not be concerned about where revenues will come from to pay for the program you design. Don't worry about federal or state requirements that may be associated with some kinds of funding. You should not think about whatever revenues might be available in the school or district in which you work or about any of the revenue constraints that might exist on those revenues.

Timing: You may create new programs or services that do not presently exist that you believe address problems that arise in schools. You should assume that such programs or services are in place and that no additional time is needed for them to produce the results you expect of them.

8. We encourage you to be creative and innovative. There is no single right approach to the task. For example:

- You may base your design on a whole-school approach (such as Roots and Wings), a charter school approach (such as Edison), or any other philosophical basis (such as Montessori) with which you are familiar even though you do not currently use it in your school district.
- You may want to use block scheduling even though your district uses a more traditional approach.
- You may want to have a longer or shorter school day or a longer or shorter school year (for some or for all students) than you use currently.
- You may expect some students to obtain some courses using education television, the Internet, or through experiences in the community or in postsecondary education.
- You may choose to supplement professional staff with community volunteers.

## **Appendix D-2**

### **Instructions to Professional Judgement District Panel Members**

April 2002  
Helena, MT

1. You are a member of one of three panels of people that is being asked to design a prototype school district. Your job is to review the work of other panels that have created prototype elementary, middle, and high schools and to design the district level organization that would include several prototype schools. The prototype schools and school districts are hypothetical C they do not actually exist and they may never be created. They are a convenient way to specify the resources that schools and school districts with a particular set of characteristics should have in order to accomplish a specific set of objectives.
2. A total of five district panels will be working today and tomorrow. Each panel is being asked to specify the resources needed to educate students in districts of various sizes. Two groups will create districts of moderate size, one group will create both a small and a very small district, one group will create a large district, and one will create a very large district.
3. The characteristics of the prototype schools and school districts are shown on a separate page. The characteristics that define the schools/districts include their enrollment, grade span, the proportion of pupils with special education needs, the proportion of pupils from low-income families (eligible for free lunch), and the proportion of Native American pupils.
3. Each group should identify someone as a recorder for the group. The recorder will be asked to fill out forms on the computer provided to the group. If possible, we hope the recorder might be able to stay a short time after the conclusion of the activity to clarify any questions A&M might have about the information provided by the group.
4. The objectives that need to be accomplished by the prototype school district are shown on a separate page. The objectives can be described broadly as either education opportunities/programs/services or as levels of education performance. A separate document shows how well districts are doing now.
5. In designing the district, we need you to provide some very specific information so that we can calculate the cost of the resources needed to meet the objectives identified above. The fact that we need that information should not constrain you in any way in designing a prototype school district. Your job is to create a set of programs/services designed to serve students with particular needs in such a way that the objectives specified above are fulfilled. Use your experience and expertise to organize personnel and other expenditures in any way you feel confident will produce the desired outcomes.

6. We are making a number of assumptions about the environment in which schools operate. These assumptions may not characterize the schools, or the school districts, with which you are familiar.

Teachers: You should assume that you can attract and retain qualified personnel and that you can employ people on a part-time basis if needed (based on tenths of a full-time equivalent person).

Facilities: You should assume that prototype schools and central facilities have sufficient space to meet the requirements of the program you design.

Revenues: You should not be concerned about where revenues will come from to pay for the program you design. Don't worry about federal or state requirements that may be associated with some kinds of funding. You should not think about whatever revenues might be available in the school or district in which you work or about any of the revenue constraints that might exist on those revenues.

Timing: You may create new programs or services that do not presently exist that you believe address problems that arise in schools. You should assume that such programs or services are in place and that no additional time is needed for them to produce the results you expect of them.

7. We encourage you to be creative and innovative. There is no single right approach to the task. You may suggest resources or methods of organizing resources that do not reflect what is being done in most school districts, or in any school district. Your task is simply to create an approach that is reasonable, and capable of accomplishing the objective efficiently.

## **Appendix D-3**

### **Instructions to Professional Judgement Expert Panel Members**

June 2002  
Helena, MT

1. You are a member of a panel of experts B people who have been identified as having extensive knowledge of how schools and school districts operate and the resources schools need to fulfill their objectives. Your job is to review the work of other panels that have created prototype elementary, middle, and high schools as well as prototype school districts of different size. The prototype schools and school districts are hypothetical C they do not actually exist and they may never be created. They are a convenient way to specify the resources that schools and school districts with a particular set of characteristics should have in order to accomplish a specific set of objectives.
2. While there is only one expert panel, it needs to review several different configurations of schools and school districts: (1) a set of two small districts –one elementary district and one K-12; (2) two average size school districts; (3) two above average sized districts –one larger than then the other.
3. The characteristics of the prototype schools and school districts are shown on a separate page. The characteristics that define the schools/districts include their enrollment, grade span, the proportion of pupils with special education needs, the proportion of pupils from low-income families (eligible for free lunch), and the proportion of Native American students.
4. The objectives that need to be accomplished by the prototype school district are shown on a separate page. The objectives can be described broadly as either education opportunities/programs/services or as levels of education performance. A separate document shows how well districts are doing now.
5. We are making a number of assumptions about the environment in which schools operate. These assumptions may not characterize the schools, or the school districts, with which you are familiar.

Teachers: You should assume that you can attract and retain qualified personnel and that you can employ people on a part-time basis if needed (based on tenths of a full-time equivalent person).

Facilities: You should assume that prototype schools and central facilities have sufficient space to meet the requirements of the program you design.

Revenues: You should not be concerned about where revenues will come from to pay for the program you design. Don't worry about federal or state

requirements that may be associated with some kinds of funding. You should not think about whatever revenues might be available in the school or district in which you work or about any of the revenue constraints that might exist on those revenues.

Timing: You may create new programs or services that do not presently exist that you believe address problems that arise in schools. You should assume that such programs or services are in place and that no additional time is needed for them to produce the results you expect of them.

You should know that we encouraged members of the prototype school and prototype district panels to be creative and innovative. Some of the resources they suggest, or the way resources are organized, may not reflect what is being done in most school districts, or in any school district. In our view, there is no single right approach to the task and we are not asking you to determine whether what the other panels have done is perfect. We only want you to decide whether the approaches being taken are reasonable B that is, capable of accomplishing the objective efficiently.

**Appendix E**  
**MSBA Salary Survey Results**

12-Jun-02	75 REPORTING DISTRICTS			
	45	13	10	7
District Name	Average based on 45 districts	Average based on 13 districts	Average based on 10 districts	Average based on 7 districts
District Size	0-500	501-1200	1201-3000	3001+
Teacher Entry	\$20,473.95	\$21,703.00	\$21,818.60	\$22,647.14
MA, 10th step	\$32,060.71	\$34,578.62	\$33,118.00	\$36,471.71
Highest TchrSlry	\$39,956.79	\$45,638.35	\$44,652.00	\$48,411.43
Average TchrSlry	\$30,845.31	\$35,299.15	\$34,295.32	\$37,602.00
Certified Sub/Day	\$54.25	\$59.69	\$56.67	\$65.57
Avg Tech Spec	\$33,774.33	\$32,141.20	\$28,340.08	\$33,928.50
Avg Tech Dir	\$32,393.80	\$38,371.14	\$40,732.27	\$51,568.20
Avg Counselor	\$34,443.01	\$41,462.75	\$35,925.41	\$43,535.00
Avg Nursing	\$27,960.10	\$27,958.08	\$39,380.40	\$30,433.86
Avg Shl Psychol	\$32,045.50	\$40,867.67	\$39,228.33	\$43,488.57
Avg Sph Patholo	\$42,156.00	\$40,942.83	\$36,666.13	\$41,541.57
Avg Social Wrker	Through Coop	\$17,222.40	Through Coop	\$39,300.00
Avg Tchr Aide	\$17,121.87	\$18,086.98	\$17,891.47	\$16,462.47
Avg Clerical	\$19,562.51	\$23,343.55	\$20,065.22	\$21,035.33
District Clerk	\$28,053.75	\$39,149.02	\$45,379.33	\$70,716.57
Avg Principal	\$43,572.05	\$55,677.67	\$58,222.56	\$64,435.07
Avg Asst Princ	\$50,316.67	\$53,932.00	\$51,973.88	\$62,399.00
Superintendent	\$70,723.16	\$69,249.08	\$72,784.11	\$91,052.86
Asst Supt	N/A	N/A	\$69,025.00	\$78,387.20
Dir of Curriculum	Through Coop	\$54,146.67	\$53,063.57	\$66,164.17
Dir Spec Ed	\$32,827.12	\$53,597.29	\$53,929.20	\$67,909.50
Dir of Facilities	\$30,912.56	\$38,675.25	\$68,646.00	\$66,087.17
Dir of Transporta	\$29,057.04	\$22,336,147.85	\$35,621.80	\$45,855.50
Avg Custodian	\$21,107.73	\$20,195.00	\$21,473.82	\$22,742.40
Avg Gen Mainten	\$20,281.75	\$27,222.48	\$26,160.50	\$27,728.80
Avg Electr/Plumb	N/A	N/A	N/A	\$43,917.33
Avg Food Srvc	\$18,190.61	\$17,166.62	\$17,621.07	\$16,196.27
Avg Bus Driver	\$23,871.47	\$21,206.69	\$26,156.00	\$23,716.90
Fringe Benefits	\$6,596.99	\$8,582.63	\$7,537.81	\$10,546.00
Supplies	\$313.60	\$230.29	\$341.35	\$138.69
Extracurricular	\$296.65	\$190.51	\$315.88	\$182.97
Total FTE	30.49	86.50	177.60	956.46
Full-day Kinderg	30NO/14YES	9NO/4YES	7NO/2YES	6NO/1YES
Certified Contract	187.07	187.2	187.0	187.7
Principal Contra	199.85	209.6	214.4	230.0
Supt Contract	254.06	255.7	260.1	260.0
Prof Develop.				