

**BEST PRACTICES FOR TUSD:
A COMPARATIVE STUDY OF
NINE ARIZONA SCHOOL DISTRICTS**

BENEFITS

FOOD SERVICE

TRANSPORTATION

UTILITIES

A Joint MPA/MBA Research Project Funded by Tucson Electric Power

SCHOOL OF PUBLIC ADMINISTRATION AND POLICY

ELLER COLLEGE OF MANAGEMENT

JUNE 2004

THE UNIVERSITY OF ARIZONA®

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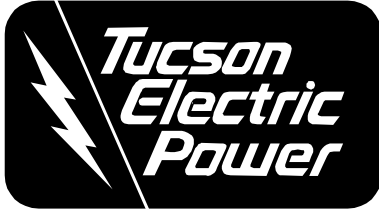
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School of Public Administration and Policy
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Best Practices for TUSD: A Comparative Study of Nine Arizona School Districts was funded by Tucson Electric Power and sponsored by the Southern Arizona Leadership Council. The Eller College of Management extends appreciation to the TUSD



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Governing Board for its interest and support and to the many school officials from the Arizona school districts of Deer Valley, Paradise Valley, Mesa, Gilbert, Peoria, Amphitheater, Marana, Sunnyside and Tucson Unified who gave so generously of their time and expertise.

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PREFACE

The TUSD Blue Ribbon Committee was formed in 2001 to support academic achievement goals and annual priorities set by the TUSD Governing Board as part of the district's **BOLD! Game**. Comprising business and community leaders with a wide range of backgrounds, the TUSD Blue Ribbon Committee has made steady progress in identifying cost savings and new revenues for directing toward student achievement. *Best Practices for TUSD*, conducted by the University of Arizona's Eller College of Management, is the latest and most in-depth effort to identify new resources. *Best Practices for TUSD* builds upon the observations and recommendations expressed in the TUSD Blue Ribbon Committee's two previous reports, the January 2002 *Tucson Unified Budget Advisory Committee (TUBAC) Report* and the February 2003 *Signs and Signals: Recommended Budget Directions for the Governing Board*.

The *TUBAC Report* examined the TUSD budget broadly. Over a period of eight months, a group of volunteer professionals developed recommendations that addressed outsourcing, increasing student enrollment, strengthening site councils, shifting resources to classrooms, and forming a committee to investigate the benefits and costs of consolidating schools, among others. *Signs and Signals* was inspired by statistics released by the Arizona Auditor General, which ranked TUSD along several dimensions. On the dimension of budget dollars spent in the classroom, TUSD ranked 133 out of 209 school districts. Given TUSD's comparatively low student-per-school ratio, the TUSD Blue Ribbon Committee posed this central research question: "Where is the out-of-classroom money going at each of our schools and within the district, and to what extent can we redirect it?"

Signs and Signals served as the foundation for *Best Practices for TUSD*. Focusing on nine sample districts selected for their comparable size, all in Maricopa County, and a few in Pima County, *Signs and Signals* compared TUSD's operating costs in the following functional areas: dollars spent in the classroom, desegregation, student support services, plant operations, transportation, administration, and salaries and benefits, among others. *Best Practices for TUSD* represents a more comprehensive effort to understand why TUSD's costs in certain categories are greater than those in the other eight districts. The TUSD Blue Ribbon Committee selected four critical areas for initial research: benefits, food service, transportation and utilities. (Though not addressed in earlier reports, the cost of utilities is a critical concern of the TUSD budget.)

The University of Arizona's Eller College of Management selected eight graduate students to conduct the research: four Master of Public Administration (MPA)

students from the School of Public Administration and Policy and four Master in Business Administration (MBA) students from the Eller MBA Program. The MPAs and MBAs were paired to form four research teams, one for each research category. The work was performed during spring semester 2004. (Student biographies are placed in their respective appendices.) Combining both public and business perspectives effectively brought together a knowledge of public organizations with their unique missions and purposes with a knowledge of finance, budgeting, accounting, and efficiency. Both perspectives are critical in finding new resources for a public educational system guided by a publicly-elected governing body and financed with public taxes.

The four research teams recommended best practices for TUSD based on their research of the nine school districts. They identified a number of opportunities in which TUSD could save money or generate new revenues in excess of \$11 million. Several more recommendations would clarify policies and practices that would lead to either additional savings or improve employee morale. Background and supporting information as well as a list of resources for each research area are found in the appendices.

The Eller College of Management research project represents an academic, independent and unbiased report. It is a separate but parallel project to TUSD's in-house Research Opportunities for Investment (ROI) Task Force. Both projects have the same goal, that of finding resources within TUSD to enhance student achievement. Both reports are to be presented to the TUSD Governing Board on June 22, 2004.

Best Practices for TUSD was funded by Tucson Electric Power under the sponsorship of the Southern Arizona Leadership Council.

Tanis J. Salant, D.P.A.
Faculty Advisor
School of Public Administration and Policy
Eller College of Management

June 2004

BENEFITS

INTRODUCTION

This research report seeks to understand how benefit dollars are spent in TUSD and to identify methods to reduce those expenditures by exploring best practices of the nine school districts (including TUSD) highlighted in *Signs and Signals*. To maintain focus and identify stakeholders and key informants for interviewing purposes, benefits were separated into two areas: insurance and leave of absence.

METHODS

The evaluation team conducted a combination of in-person interviews, phone interviews and email surveys with various district personnel. Based upon initial contact with TUSD benefits and leave of absence personnel, the evaluation team generated the following questions:

Benefits

- In what ways does the district work to reduce costs?
- In what ways are employees educated about the benefits available?
- How accessible is customer service?
- How many employee groups/tiers are involved with the benefits plan?
- What is the employee contribution to insurance premiums? What is the district contribution?
- What employees qualify for full benefits?
- How many employees qualify for full benefits?
- Does the district offer "partial" benefits plans – for part time and temporary employees?
- If yes, how many employees qualify for partial benefits?

Paid Leave of Absence

- How is paid leave accrued?
- What is the maximum amount of leave an employee can accrue and sell back to the district upon resignation/retirement?
- How many unions/associations represent employees in the school district?
- How do you feel your leave of absence policies compare to those of other districts?
- What is the leave policy's impact on employees (e.g., how do employees react when another takes an extended leave because he/she has accrued significant leave)?
- What is the liability on the balance sheet for leave of absence (e.g., the Comprehensive Annual Financial Report statement)?

- Can employees donate their accrued sick leave to others who need it?
- Who negotiates on behalf of employees when benefits and salary changes occur?

These key questions served as a starting point for interviews with district contacts. The questions were sent in advance via email to guide discussion.

In studying benefits, the team focused on two areas: insurance and paid leave of absence. (Paid leave of absence is defined as personal leave and sick leave for non-12 month employees and as vacation and sick leave for 12-month employees.) The team focused specifically on the following variables: district contribution to insurance benefits, maximum amount of accrued paid leave allowed to employees, and district-paid leave liability (e.g., how much of the district budget is earmarked for paid leave).

The evaluation team contacted a total of 20 district personnel as well as insurance consultant Paul Zucarelli of CBIZ Gordon, Zucarelli & Handley Business Services and the Arizona Department of Education. Additionally, the team gathered supplemental materials from the United States Department of Treasury, the United States Department of Labor, the World Health Organization and Diabetes Living.

RANKINGS

Signs and Signals indicated that TUSD was second behind Mesa Unified in overall number of employees; therefore, overall benefits costs should be high. TUSD also had the highest percentage of the budget allocated to employee salaries and benefits. However, TUSD was eighth in rank by beginning salaries and fourth by average salaries, implying that their benefits costs are the highest within the study.

FINDINGS

- TUSD has the largest number of employee groups and is tied for the most employee associations (see charts A-1 and A-2 in Appendix A).
- TUSD's per employee monthly insurance benefits contribution is slightly above the average for the nine school districts studied. There are opportunities for cost reductions which would maintain TUSD's competitive edge with other districts.
- TUSD has the greatest number of employees qualifying for full insurance benefits (see chart A-3 in Appendix A).
- TUSD is slightly below average for maximum accrued paid leave that can be sold back upon resignation/retirement; however, there are two school districts with significantly lower allotments.
- Of the five school districts that provided information on annual expenditures for paid leave of absence, TUSD was third in expenditures.

RECOMMENDATIONS

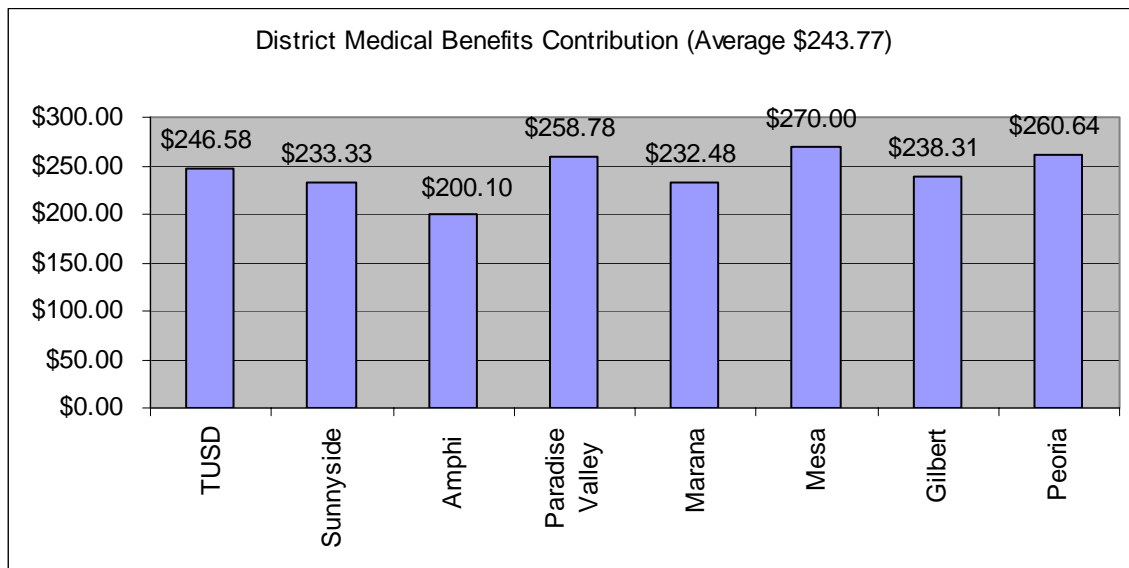
Seven recommendations and one commendation are related to employee insurance benefits; six recommendations and two commendations are related to paid leave of absence.

Employee Insurance Benefits

Recommendation 1: Shift more insurance costs to employees, thereby reducing district contribution. Estimated savings: \$900,000.

By shifting part of the district contribution to employees, TUSD stands to realize significant cost savings. The district presently has over 7,800 employees who qualify for full benefits. If the district reduces its contribution by \$10.00 per employee per month, it can save approximately \$78,000 per month, which would translate into annual savings exceeding \$900,000, as presented in chart 1 below.

Chart 1



Recommendation 1A: Encourage employees to use health savings accounts (HSA) in order to offset increased employee contributions. Estimated savings: none.

Advantages of HSAs include covering the health insurance deductible and any co-payments for medical services, prescriptions, or products, purchasing over-the-counter drugs and long-term care insurance, and paying health insurance premiums during any period of unemployment” (www.ustreas.gov). Other advantages include:

- Individuals and employers can contribute to the funds
- Contributions by individuals are tax deductible
- Interest and investment earnings are not taxable, and withdrawn amounts are not taxable so long as the funds are used for qualified medical expenses
- The funds are portable—HSA’s are owned by individuals and can be rolled over when the individual makes an employment change

Recommendation 2: Reconcile insurance statements on a monthly basis. Estimated savings: \$1.2 million.

TUSD should work in concert with insurance providers to ensure that changes in an employee’s status have been properly documented and that the district is billed appropriately. While a windfall of savings should not be expected by adopting this practice, the district will experience some savings. Amphitheater School District’s benefits manager, Joan Leslie, estimates that the district incurs approximately \$660,000 in medical and dental invoices monthly. She calculates that “Even a small error rate could mean significant dollars. For example, a 10 percent error rate could cost the district \$66,000 per month.” The district is also able to catch errors sooner and not inconvenience employees by not being on the coverage when they should be. While it is not known how much in medical and dental invoices TUSD incurs every month, a conservative estimate would be \$1 million. Thus, reducing an error rate by 10 percent would potentially save TUSD \$1.2 million annually.

Commendation 1: TUSD has an excellent customer service and support system for medical benefits

Benefits staff members are available to address employee questions and concerns about insurance coverage and plans. TUSD provides multiple channels through which employees can receive necessary information (i.e., customer service window, phone representatives, newsletters, and open enrollment informational sessions).

Recommendation 3: Implement an employee education program focused on measures employees can take to reduce medical costs. Estimated savings: unknown.

A consistent medical education program (in the form of newsletters and workshops) can help to control insurance costs, particularly costs stemming from chronic, preventable conditions which require high levels of care. For example, diabetes is one of several chronic diseases that incur high costs. It is one of the fastest growing health concerns worldwide and is often preventable. Medical costs for individuals with diabetes are estimated to cost \$10,000 annually (www.diabetesliving.com). The district should strongly encourage employees to take advantage of preventative health care, such as reminding them of annual check-ups and monitoring blood pressure and blood sugar. This should also be included in the employee education program.

Recommendation 4: Encourage employees to use generic prescription drugs. Estimated savings: unknown.

In tandem with recommendation 3, a tiered drug program can reduce costs for employees and minimize future district increases by the provider. As more generic drugs are approved, careful education can help ensure comparable healthcare while keeping costs as low as possible. Paradise Valley School District's Jim DiCello has estimated that "going to a [three-tier drug plan] has saved 5 percent of an increase in the year we went to it. Our current tiers are \$10/\$25/\$50. We can save another 2 percent by going to a fourth tier and making the tiers \$15/\$30/\$60/\$120."

Recommendation 5: Encourage spouses working within the district to utilize one consolidated benefits plan. Estimated savings for 50 couples: \$148,000.

When each spouse is covered by a separate insurance plan, the district must pay benefits for each employee. Consolidation of couples into one plan garners cost reduction and still provides each employee the same level of coverage. TUSD stands to save \$246.58 per couple, per month. (Figures for couples are not currently available for TUSD.) In a hypothetical situation in which TUSD had 50 couples qualifying for full benefits, the district could save an estimated \$148,000 per year. The Paradise Valley and Sunnyside districts encourage consolidation of spousal coverage.

Recommendation 6: Leverage consultants with national presence to negotiate insurance rates. Estimated savings: unknown.

Upon issuing requests for proposals, TUSD should continue to seek outside consultants to assist in negotiations with insurance providers. CBIZ Gordon, Zucarelli & Handley Business Services is a local consulting agency which is part of a national consulting network. CBIZ claims that TUSD could save money if it used their consulting expertise. For instance, the company saved the Archdiocese of Tucson \$1,200,000 on its benefits expenditures in the first year after switching to CBIZ. Furthermore, when the city of Tucson faced 30 percent to 40 percent rate increases, CBIZ limited the increase to only 12 percent while maintaining the same provider and service levels.

Paid Leave of Absence

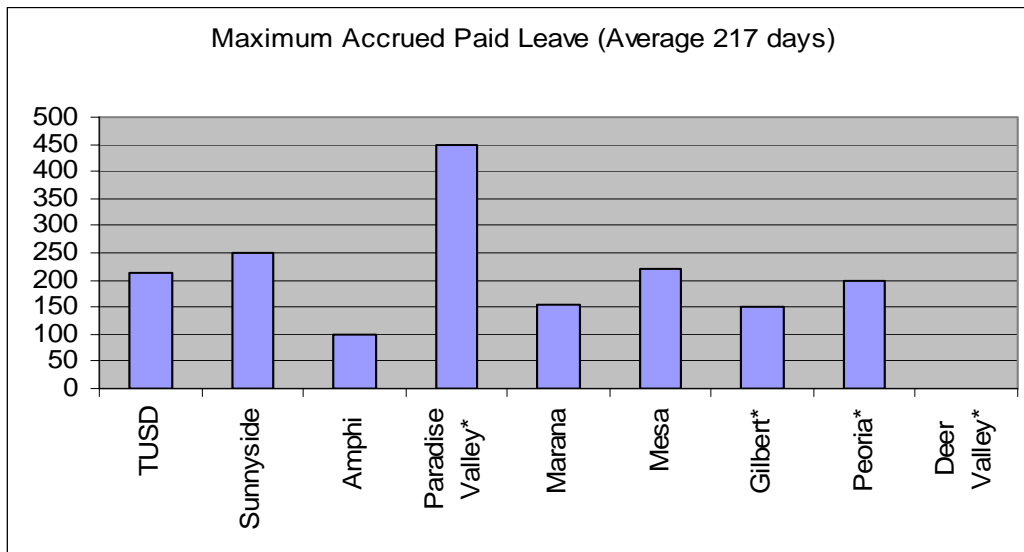
Commendation 2: TUSD places a cap on the amount of accrued paid leave (sick leave, personal, and vacation) that it will “buy back” from employees upon resignation/retirement.

Four sample school districts do not place a limit on the amount of accrued paid leave employees can sell back to the district at resignation/retirement. TUSD will compensate qualified departing employees for up to 1,700 hours of accrued paid leave (212.5 days). Paradise Valley, Deer Valley, Gilbert and Peoria school districts do not limit accrued paid leave that can be sold back.

Recommendation 7: Reduce the maximum amount of accrued paid leave that employees can sell back to the district upon resignation/retirement. Estimated savings: unknown.

While TUSD does limit the amount of accrued leave that can be sold back, there is little incentive to use up sick leave and personal time as unused benefits accrue and are redeemable upon retirement as a lump sum bonus. The purpose of these benefits is to ensure that employees are healthy and refreshed, not to pay for extra compensation upon the end of their employment. TUSD’s current maximum accrual is 212.5 days compared to a low of 100 days for Amphitheater School District and 156 days for Marana School District, as displayed in chart 2 below.

Chart 2



NOTE: Paradise Valley, Gilbert, Peoria, and Deer Valley school districts do not place a cap on the number of days employees can “sell back” at resignation/retirement.

Recommendation 7A: Develop a more understandable formula for determining redeemable accrued paid leave. Estimated savings: none.

There is ambiguity around how much accrued leave is sick, personal, or vacation time; and rates of compensation for these three types of paid leave do not appear to be uniform. By deriving a more understandable formula, TUSD will be better equipped to understand yearly liability for accrued paid leave.

Recommendation 8: Encourage employees to retire early. Estimated savings: \$5.3 million for 100 teachers.

Employees who would like to continue teaching can seek employment through Educational Services Incorporated (ESI). When contracted by ESI, teachers can return to the school as permanent substitutes at 80 percent of their salary and are also eligible to receive Arizona State Retirement System benefits. This option saves the district money in terms of salary payments and benefits contributions. An estimated 100 employees retire from TUSD annually. Using an average salary of \$50,000 at retirement and \$2,959 in annual insurance benefits, the district could save approximately \$5.3 million for each year that it encourages 100 teachers to retire one year earlier than they had planned. Paradise Valley and Sunnyside districts encourage early retirement and utilize ESI employees. (Additional support for these estimates is found in an Employees Preferred Corporation projection report based on the retirement of 625 employees.)

Commendation 3: TUSD has implemented policies making extended unpaid leave of absence more difficult to attain.

TUSD has implemented measures which compel employee accountability. Employees seeking to take extended leaves of absence must receive permission and signatures from their school principal and district officials. For two-year leaves of absence, employees must present their case before a review committee.

Recommendation 9: Reduce the maximum amount of time that a position remains protected while an employee is on extended leave. Estimated savings: none.

TUSD policy allows teachers to return to the same position after a maximum of two years leave. The district should reduce the length of time that a job remains protected. Data indicate that most individuals do not return after a two-year period. Note: This recommendation does little for direct cost savings; however, it increases continuity within the classroom and reduces administrative hours spent on managing substitute replacements.

Recommendation 9A: Standardize all governing board-approved leave reasons; there is currently a distinction among new infant, child and elderly parent care reasons. Reclassify all reasons as “immediate family care.” Estimated savings: unknown.

Recommendation 9B: Follow federal law regarding Family Medical Leave Act (FMLA). Estimated savings: unknown.

FMLA does not stipulate that an employee’s accrued paid leave is not accessible. In fact, it allows employers to require their employees to utilize paid leave during their 12 weeks of FMLA (www.dol.gov). Employers are required to allot up to 12 weeks leave; however, if an employee has six weeks worth of paid leave, it can be applied towards his/her extended leave. Current TUSD policy allows employees to use their paid leave, and then request FMLA. TUSD should require that accrued paid leave go toward their 12 weeks of FMLA.

FUTURE RESEARCH OPPORTUNITIES

Several opportunities for future research on benefits have been identified for TUSD. In order to determine whether employee benefits and paid leave of absence policies are optimally implemented, TUSD should investigate the following:

- Other districts' insurance bidding practices
- The feasibility and cost-effectiveness of contracting with an insurance provider that allows joint purchasing of insurance coverage
- How other districts have implemented wellness/health education programs
- How other districts categorize paid leave of absence and how employees are compensated for leave of absence (e.g., are types of leave compensated differently?)

FOOD SERVICE

INTRODUCTION

The following recommendations are focused on the Food Service Department (FS). This department is responsible for serving meals at all elementary, middle and high schools in the district. The majority of the financing for these programs comes from federal subsidies as part of the National School Lunch Program/School Breakfast Program. (This program was established in 1946 as a way to ensure that public school students receive nutritionally balanced, low-cost or free breakfasts and lunches.) Food Service has the potential to impact student achievement directly through improved nutrition. Food Service operates as a self-sufficient enterprise fund with operations ranging from meal preparation and delivery to capital improvements and maintenance. Budget components include federal reimbursements district contributions and internally generated revenues, commodities, salaries, benefits, capital maintenance and employees.

METHODS

Methods include personal interviews, school surveys, Arizona Department of Education data on food service, budget data, and national best practices research. The team commenced research with *Signs and Signals*.

RANKINGS

Signs and Signals portrays TUSD as the “biggest spender per student” for FS but it ranks the district sixth in spending per school. (The FS team ultimately refuted these statistics.)

FINDINGS

TUSD’s fiscal year 2003-2004 Adopted Budget and the Comprehensive Annual Financial Report (CAFR) also provided a starting point for research. The CAFR ultimately revealed that funding for FS comes primarily from the federal government (70.6 percent) and secondarily from internally-generated revenues from sales (29.4 percent). (Table B-1 in Appendix B presents revenue sources.)

The team used benchmarking as a way to determine the best and poorest performers with respect to food service expenditures. The main criterion was to find the districts that do not subsidize their food service. The rankings are shown in the table below and in table B-2 in Appendix B in percentage form.

Table 1: M&O Support to FS Budgets

District	2001	2002	2003
Deer Valley SD	\$ 0	\$ 0	\$ 0
TUSD	\$ 0	\$ 0	\$ 0
Amphitheater SD	\$ 28,899	\$ 47,985	\$ 0
Marana SD	\$ 99,195	\$ 169,951	\$ 0
Paradise Valley SD	\$ 3,463	\$ 2,378	\$ 31
Peoria SD	\$ 0	\$ 0	\$ 15,716
Sunnyside SD	\$ 0	\$ 322,880	\$ 21,958
Gilbert SD	\$ 15,055	\$ 0	\$ 231,235
Mesa SD	\$ 699,244	\$ 740,279	\$ 678,780

The results of the table demonstrate that TUSD did not subsidize food service from its maintenance and operation (M&O) budget. Deer Valley School District also ranks favorably. The absence of district funds in the FS budget is an indicator that operations are self-supporting. At the same time, food service operations in the Deer Valley, Mesa, Peoria and Paradise Valley school districts have been contributing to M&O budgets, as table 2 shows:

Table 2: FS Funds Contributed to M&O

District	Enrollment	Total number of FS employees	M&O Support From FS Dept.	Percentage of FS Annual Budget
Peoria	36,600	200	\$230,000	4%
Mesa	73,950	690	\$1,350,000	7.5%
Scottsdale	26,635	175	\$550,000	8%
Deer Valley	32,000	250	\$250,000	4%
Paradise Valley	34,000	122	\$800,000	14%

A serious dissonant problem is buried in the definition of “dollars spent in the classroom.” Looking at the National Center of Education Statistics’ definition of classroom and non-classroom dollars (see table B-3 in Appendix B), the dollars spent by FS are counted against classroom expenditures. Even though the FS budget does not absorb the money from the TUSD budget, it makes the proportion of classroom dollars to non-classroom dollars adverse. The reasonable question here is: “If the district does not subsidize FS, should it still press the FS managers to spend less per student?”

Further complicating the budget picture with the FS enterprise fund is the governing board-approved increase in salaries and benefits for all TUSD employees. The increase results in an additional cost of about \$300,000 (excluding the costs of summer operations); the FS budget will have to finance this increase, which represents a “contribution” by FS to TUSD’s M & O budget.

The team anticipated that outsourcing food service, a common practice in school districts, would offer opportunities to increase revenues. However, it was learned that some outsourced food services experienced reductions in revenue and some in-house food services generated additional revenues. No conclusion could be drawn from such mixed outcomes.

RECOMMENDATIONS

The FS team developed five recommendations that would either redistribute costs, save money, or generate more revenue.

Recommendation 10: Develop a cost-allocation system to charge the FS fund for utility expenditures. Estimated savings: \$201,960.

All costs related to district utilities are currently financed from the M&O budget. Developing and implementing a cost-allocation model for FS would reduce utilities expenditures. FS operations would then be charged for actual use. The following table presents a model for allocating utility costs.

Table 3: Cost Allocation Model

Square Footage Method			FTE Method		
A	District's Total Square Footage	8.6M	A	District's Total FTE Count	7,500
B	Square Footage of Cafeteria	X	B	FTE Count for Food Services	341
C	Divide B by A	X%	C	Divide B by A	4.5%
D	Total Utilities Expenses	\$13.6M	D	Total Utilities Expenses	\$13.6 M
E	Total Costs to Allocate (C x D)	\$X	E	Total Costs to Allocate (C x D)	\$612,000

Given the difficulty of determining exact utility usage by cafeterias, the above model could provide some direction toward a fair allocation amount. The formula should also take into account the number of hours kitchens are used each day. For example, multiplying the \$612,000 by one-third day brings the amount down to \$201,960. In addition, FS is currently looking into taking over all data entry for payroll, as well as absorbing costs for laundering uniforms and aprons.

Recommendation 11: Increase revenues by increasing student meal participation rates. Estimated new revenue with a 3 percent breakfast/lunch increase: \$381,786.

FS staff could learn why students are not participating by conducting surveys at the school level. Also, rates could increase if other practices used outside the state were incorporated into their current program.* TUSD participation rates for breakfast and lunch have not changed significantly in the last four years. The team surveyed selected school districts to identify obstacles to and methods for increased participation rates. Communication between FS and families was accomplished through customer taste tests, the website, and customer surveys. At TUSD, according to one cafeteria manager, the annual survey method did not seem effective and had not been modified recently. Employees in the cafeterias have a closer connection with kids and should be given more responsibility for survey construction and distribution, leaving survey analysis in the hands of upper management. Districts were in agreement about the following methods for increased participation rates, especially in elementary schools:

- Improving communication with transportation to improve morning arrival times
- Locating breakfast carts/kiosk stations at bus stations
- Implementing a Grab 'N' Go Breakfast program
- Serving meals in first period
- Increasing the number of perceived healthy food items
- Increasing the number of service line final assembled items

Based on TUSD's fiscal year 2002-2003 breakfast participation rates, there would be an annual increase of \$61,441 if participation rates were increased by 3 percent and \$204,803 by 10 percent. Based upon TUSD's fiscal 2002-2003 lunch participation rates, there would be an increase of \$320,346 and \$533,911 in federal revenue if participation rates increased by 3 percent and 5 percent, respectively. Table 4 below shows these calculations.

*Texas: Texas School Performance Review, Killeen Independent School District (Chapter 11).

Table 4: Increased Meal Participation Rates

	Breakfast Program			Lunch Program	
	3% Increase	10% Increase		3% Increase	5% Increase
Paid (5.2%)	\$522	\$1,742	Paid (22%)	\$9,346	\$15,577
Reduced-Price (7.6%)	\$3,925	\$13,083	Reduced-Price (10%)	\$33,431	\$55,718
Free (87.2%)	\$56,992	\$189,975	Free (68%)	\$277,569	\$462,616
TOTAL	\$61,440	\$204,802	TOTAL	\$320,346	\$533,911

Recommendation 12: Continue site-manager attrition to reduce salary expenditures. Estimated savings: \$450,000 in five-10 years.

A 10 percent reduction in management staff over a five- year to 10 year-period with average salaries of \$45,000 would result in \$450,000 in savings to TUSD Food Service. Paradise Valley FS provides an example of a successful service running with significant staff decreases over the last seven years.

Recommendation 13: Develop an internal accounting standard to benchmark dollar amounts that FS contributes to M&O. Estimated savings: unknown.

As presented in table 2 earlier, sampled districts benchmark their M&O contributions. The team recommends that TUSD participate in this practice. In addition, TUSD’s current accounting control system is unique in comparison to sampled districts in terms of direct/indirect classification: most of indirect costs are reclassified into direct and tracked as such. While this makes the TUSD system more transparent, it also makes it difficult to compare with other districts.

Recommendation 14: Purchase supplies at a discounted rate (similar to those of Aramark and Chartwell). Estimated savings: unknown.

Cash reserves must be built up from up to 5 percent to at least 20 percent in order to do this. These companies position themselves as being more advantageous in terms of market power than independent districts. TUSD’s cash reserves have been drying up over the last three years.

TRANSPORTATION

INTRODUCTION

The TUSD Transportation Department had an operating budget (M&O) of \$14,349,019 in fiscal year 2002-2003. The department provides both pupil transportation and district support vehicles. The budget is composed of federal desegregation funds, state funds based on a rate of per mile reimbursement, and M&O dollars. The department provides both pupil transportation and district support vehicle maintenance. Although there are advantages to large organizations like the TUSD transportation department, disadvantages come in the form of large and small problems that generate inefficiencies. This study attempts to estimate how many dollars out of TUSD's annual transportation budget represent these inefficiencies. It also identifies the "20 percent of the problems that cause the 80 percent of these inefficiencies." (If these 20 percent are tackled first, the greatest cost savings will be realized in the shortest possible time and with the least amount of effort, relatively speaking.) This report describes what these problems are, how much they are costing the district, recommendations for attacking various aspects of the problems, and the savings that will potentially result.

METHODS

The transportation directors of each of the nine school districts were interviewed in order to understand the biggest problems plaguing school district transportation departments and to develop a base of "best practices" or unique solutions to common problems. A subsequent list of best practices was used to explore possible cost saving solutions for TUSD. A series of meetings was first held with the TUSD transportation director and several other TUSD personnel. TUSD documents, state transportation documents, school district budgets, and national research literature were consulted. Preliminary costs and savings were calculated for each of the recommendations based on these documents and discussions with district personnel. Additionally, transportation directors from seven school districts in Pima County provided feedback and direction on the preliminary recommendations. Pima County, the city of Tucson, and local vendors were also contacted for information.

This report describes possible savings based on information that was made available to researchers from employees of several school districts. While care was taken to verify the information received, many of the numbers involved are approximate. Moreover, savings possible through consortium buying relies in part on the speculation of fuel and bus vendors. No promises were received from any vendor.

RANKINGS

In *Signs & Signals*, TUSD ranked third among the nine school districts for the highest transportation costs per student. This figure does not account for the larger area that TUSD encompasses. Dollars per student per square mile would place TUSD fifth among the school districts. These are rough measures of comparison. A better measure would be cost per mile. Because districts differ in the manner in which they allocate expenditures among categories in their budgets, an accurate and comparable figure for cost per mile is not available. Even this figure would not account for the differences in individual district needs (e.g., higher numbers of special education students or desegregation order compliance). In spite of the difficulty of comparing districts, other transportation departments have offered valuable insights into ways that TUSD can improve its operations and become more cost efficient. (Tables C-1 and C-2 in Appendix C present transportation costs and costs per mile. Table C-4 arrays the costs of transportation departments in all nine districts.)

FINDINGS

The Transportation Department employs 275 bus drivers and 228 bus monitors, as well as 189 crossing guards. Substitute drivers and monitors are employed as back up. It operates two facilities, each of which houses a garage. The department employs nine mechanics to service the 299 buses and 300 district support vehicles. The support staff includes training personnel, bus routers, dispatchers, payroll and clerical staff, and administrators. The major costs of the department include salaries/wages and benefits, fuel, and vehicle maintenance.

There are four major areas in which TUSD faces problems of inefficiency and high costs. The areas in which the district could realize substantial savings are:

- bus driver and monitor turnover rate
- bus driver and monitor absenteeism
- overtime pay
- fuel costs

Not all of these are root problems. Specifically, turnover among bus drivers and monitors in combination with absenteeism leads to increases in overtime hours and pay. The bus driver turnover rate for fiscal year 2002-2003 was 19.6 percent. This is not high compared to the turnover in the Marana School District, which is between 30 percent and 40 percent annually; it is certainly substantial in comparison with other districts, however. High turnover creates the need for a large number of substitute drivers and the use of overtime pay for regular drivers.

The cost of turnover and absenteeism is approximately \$1,227,398 a year. The total overtime cost is \$877,506. The loss due to increases in fuel prices in fiscal year 2002-2003

was \$353,743. If there were no turnover, absenteeism, or rise in fuel prices, the total savings would be \$2,211,923. Further, a 5 percent savings on supplies would save an additional \$36,721. Thus, \$2,248,643 is the amount of total theoretical loss due to inefficient operations. (The calculations used to derive this number are included in Appendix C.) More than 70 percent of this inefficiency is due to turnover, absenteeism and fluctuations in fuel prices. Therefore, if the Transportation Department is able to reduce the magnitude of these problems, it is likely to realize the maximum savings.

The possible causes of the high turnover rate among bus drivers include:

- Natural attrition due to old age and death
- Lure of better working conditions and pay at other organizations like Suntran
- Dismissal of drivers for various reasons (up to five are fired every year), such as:
 - Poor attendance
 - Negligence
 - Drug and alcohol abuse
 - Child sexual abuse
 - Misbehavior, verbal/physical abuse
- Hiring of retirees who have other sources of income
- Termination during probation period
- Some drivers get voluntarily demoted to monitors and some monitors get promoted to drivers. The latter number is higher

Since turnover and absenteeism among bus drivers and monitors are common problems among transportation departments, the team looked at some unique ways in which other school districts have addressed these problems. These are discussed in the recommendations.

TUSD interviews suggest that there is a high degree of dissatisfaction and discontent among bus drivers with regard to workplace culture and human resource policies that concern sick leave and leave during the probation period. There are also signs of unfavorable workplace politics, especially concerning the relationship between drivers and routers/dispatchers. Ultimately, the relationships with other people at work and a job that makes them vulnerable to sickness and leaves them jobless during two and one-half months every year might be the biggest factor contributing to turnover. The following recommendations address these issues.

RECOMMENDATIONS

The following list of recommendations can be divided into two categories. The first three would cost relatively little to implement. The last five would require a sizeable initial investment in the form of pilot programs and, if successful, subsequent investment costs. The second set of recommendations addresses key areas in the transportation budget and has the potential to create much larger future savings.

Recommendation 15: Pursue a fuel purchasing arrangement with the city of Tucson, Pima County, other school districts within Pima County, or some combination of these. By bidding with other organizations, purchasing power is increased and lower average fuel prices will be obtained. Estimated savings: \$32,560.

The cost of gasoline in fiscal year 2002-2003 was \$1,051,034. This represents 7.7 percent of the total transportation budget for that year. Fuel prices have been steadily increasing, and fluctuations can have a relatively large impact on the budget. Mesa Unified School District has saved money by purchasing its fuel from the city of Mesa. A comparison of fuel prices between TUSD and the city of Tucson revealed that between July 1, 2003 and February 29, 2004 the average fuel price paid by the city of Tucson was less expensive than that paid by TUSD by 2 cents per gallon for unleaded and 3 cents per gallon for diesel. Moreover, during this period of time, TUSD was never able to obtain a better price than the city of Tucson did. This represents a loss of \$32,560 in fiscal year 2002-2003 to TUSD for not purchasing in larger quantity.

Perhaps even more desirable than a fuel arrangement with the city of Tucson is an arrangement with several other school districts in Pima County and/or Pima County itself. A number of districts would purchase a much greater quantity of fuel than the city of Tucson and could therefore obtain even better prices. TUSD's purchasing power would increase 66 percent from 93,148 total gallons per month to 154,576 total gallons by purchasing in concert with the other four largest fuel-consuming school districts in the county (Amphi, Sunnyside, Marana, and Flowing Wells). Each of these districts is currently purchasing from the state bid except for Flowing Wells, which purchases with fuel cards from Union Distributing. (This company has expressed an interest in working with the districts in consortium and is confident that it could price below the state bid at high volume.)

Pima County purchases approximately 151,153 gallons of unleaded and diesel fuel per month. Thus, a consortium with Pima County would increase TUSD's current monthly purchasing power of 93,148 gallons by 62 percent. However, if Pima County, TUSD, and the four largest school districts were to purchase together, TUSD's purchasing power would be 428 percent greater than its current amount at 398,877 gallons per month.

The exact savings possible from such a consortium is currently unknown and would vary depending on the number of willing participant organizations and the manner in which fuel is purchased. The city of Tucson purchases approximately 200,000 gallons of fuel per month. If TUSD were paying city rates, it would save \$32,560 per year based on the average price difference between July 2003 and February 2004. This may be used to approximate the average savings if TUSD were to combine with the four other districts at the state bid price. However, purchasing with the city or county would increase the buying

power of both parties and may lower prices even further. Finally, purchasing in high volume through another vendor may also increase savings.

Recommendation 16: Organize a purchasing consortium with other Pima County school districts. Estimated savings: \$3,000-\$11,000 per bus.

Expensive budgetary items such as school buses and vehicle parts could be placed on joint bids allowing TUSD and other school districts to benefit from significantly greater purchasing power. Such a consortium would command buying power sufficient to lower prices on everything from bus parts to new buses. In March 2004, TUSD purchased three 84-passenger transit buses at an average price of \$100,267 each. Later that month, it purchased 26 84-passenger transit buses from the same company. These buses cost an average of \$89,195 per bus, or \$11,072 less than the three-bus purchase. This translated into a savings of \$287,868 for purchasing 26 buses at one time instead of three.

Each of the three major bus vendors in Arizona offers volume discounts. Such discounts begin with as few as five buses. Thomas offers a 3 percent discount for purchases of five or more like-model buses. Blue Bird routinely offers a discount of 1 percent for six to 15 buses and 2 percent for 15 or more purchased at a time. Each of the vendors has stated that bids for a substantially larger volume would see significant savings.

Recommendation 16A: Plan ahead so that bus purchasing can be done on a two- or three-year cycle. Estimated savings: unknown.

This will allow the district to purchase in greater quantity at a time and realize some savings whether or not a consortium is in place.

Recommendation 17: Contract a marketing company to sell student-friendly advertising space on school buses. Estimated revenue: \$120,000.

Arizona State law authorizes school districts to sell advertising space on district buses and establish a school bus advertisement fund. Revenues generated from such sales are not subject to reversion and may be used for “pupil related costs as determined by the governing board” (ARS 15-342). By contracting out the marketing, TUSD will be able to generate revenues without incurring any additional internal costs.

Paradise Valley Unified School District hired a company to sell mini-billboard type advertising space on their buses to companies with student-friendly ads. The marketing

company generated over \$100,000 for the district in the first three years. The director expects that revenues will increase as the program moves out of its fledgling status. While this amount is relatively small in comparison to the overall transportation budget, it could easily free funds to implement other more substantial cost-saving projects with initial starting costs. It is conservatively estimated that TUSD could generate roughly \$120,000 per year, or about one-third that of Paradise Valley. (TUSD operates 70 percent more buses and covers two and one-third more territory.)

Recommendation 18: Combine bus driver training programs for all county school districts to form a centralized driver training program. Estimated savings: unknown.

School districts could share the cost of training new drivers and re-training returning drivers. Supply and demand can be balanced better and techniques can be employed to match driver profiles with the specific requirements of a particular school district. The current cost of training a driver at TUSD is about \$4,200. The cost of training drivers in other districts is also quite costly. TUSD was short 10 drivers in fiscal year 2002-2003; other schools experienced similar shortages as well. By combining training facilities, schools would have a larger combined pool from which to pick drivers. There are issues of loss of control over the process, but the selection and assignment of drivers can be based on carefully designed rules. The benefits from this program include greater utilization of the training facility, reduced per driver training costs, a larger selection pool, and increased availability of trained drivers.

Recommendation 19: Do not operate buses older than five years. Estimated savings: unknown.

TUSD would in the long run spend less on the maintenance of its bus fleet and, since buses would break down less frequently, the working conditions for the drivers will improve. The fleet can also keep up with advances in technology. This idea came from the interview with the transportation director of the Catalina Foothills School District. The experience of mechanics who maintain school buses indicates that the best strategy with respect to getting value out of a school bus is to “run it until it completely breaks down.” There is no value in spending dollars attempting to prolong the lives of these buses, as they are operated under very strenuous conditions. Based on some interviews, it appears that buses do break down quite often, thus adding to the frustration of bus drivers who are working under great stress already. At most school districts, the average age of buses is 12 years. If this recommendation were to be combined with Recommendation 16, school districts would buy buses more often, but at a substantially lower cost; moreover, they would be spending less on maintenance and repairs.

Recommendation 20: Purchase hybrid electric vehicles. Estimated savings: unknown.

Hybrid electric vehicles have a much lower cost of ownership compared to regular gasoline and diesel buses. A good number of school districts in California already operate these buses with success. Since EPA is moving toward stricter pollution laws, these low pollution vehicles could be a step in the right direction. As a consortium, the school districts might be able to precipitate the building of the infrastructure needed to operate these buses successfully.

Recommendation 21: Allow drivers to cash out a percentage of their sick leave at the start of the jobless period. Estimated savings: unknown.

Most drivers at TUSD work for nine and one-half months. This means they have to find other work for the balance of the year. This can be a very stressful situation for most drivers, especially single mothers. By allowing drivers to cash out a percentage of their sick leave (say 70 percent, or approximately \$1,300), they could get some degree of financial help during the lean months. This would provide drivers with an incentive to attend to work more regularly. The success of such a program depends on how it is designed, the incentives that it provides, and how it is executed.

Recommendation 22: Cross-train drivers and/or put them to work on non-driving tasks during the jobless period. Estimated savings: unknown.

This can bring greater stability to the lives of the bus drivers and may lead to a lower turnover rate. Assured of work during the remaining two and one-half months, drivers may increase their loyalty to TUSD. Cross-training may ultimately cost less than the cost of high turnovers.

FUTURE RESEARCH OPPORTUNITIES

Conduct a demographic study of bus drivers and monitors based on the following factors: gender, age, education, marital status, state of origin, area of residence in Tucson, and retirement status. Through such a study, TUSD will gain a better understanding of the turnover and absenteeism problems and might even be able to develop a recruitment model to identify those most likely to stay with TUSD based on historical demographic data. Human resources would have more data with which to assist the needs of drivers. It would also help to use well-designed exit interviews to study the problem of turnover.

Research suggests that the majority of organizational problems are derived from the system rather than the employees. If perverse incentives exist in the system, employees will respond to them, thus leading to problems. An example of a policy that creates a perverse incentive was found for the maintenance department. It states that if a mechanic discovers a technical problem with a bus, it is his duty to fix that problem. This policy teaches mechanics to ignore problems to avoid possibly having to work overtime to fix the problem. An interview with a senior bus driver revealed that bus leaks are not attended to immediately and action is initiated only after substantial damage has occurred. Further, the oil reservoir leaks several gallons of oil a week and these leaks are generally ignored.

UTILITIES

INTRODUCTION

Arizona school districts receive a subsidy from the state of Arizona called Excess Utilities. The allotted dollar amount derived per district is based on what the utility usage was in 1984 and readjusted by the Revenue Control Limit (RCL) each year. Consequently, the amount of Excess Utilities does not account for legislatively-enacted Students First facility changes. As part of Students First, TUSD had to eliminate swamp cooling and replace it with air conditioning. Since that change, the district's utility costs have skyrocketed, and the gap between Excess Utilities and actual expenditure costs has deepened. During fiscal year 2002-2003, TUSD received \$7 million in Excess Utilities subsidies; however, the Excess Utilities program is slated for elimination in 2009. Not only is TUSD encumbering additional costs from air conditioning replacements, but also it will lose \$7 million in annual state appropriations by 2009.

METHODS

The types of utilities included were electric, gas and water. In an effort to study the utilities of the nine school districts, the team constructed a questionnaire to address several areas (see Appendix D). Questionnaires were supplemented by personal interviews and telephone interviews with officials in the Tucson, Sunnyside, Paradise Valley, Marana and Mesa school districts. Additional information was collected from state agencies such as the Department of Education, the School Facilities Board, and the Auditor General. Every district responded; however, not all questions were answered by each district.

FINDINGS

The team discovered that TUSD has several "schools" and "programs" that operate within existing schools. According to the budget director and building inspector, there are 104 schools, 16 alternative education programs (five of which are in one site and three on Pima Community College campuses), and nine additional sites. In addition, there are 32 other facilities in the district. In an attempt to incorporate all schools/buildings/facilities into the team's methodology, the number 122 was selected for number of schools.

The team determined that TUSD has the greatest utility burden of the nine districts. The size of the district, the age of the schools and the recent conversion to air conditioning have greatly increased TUSD's energy costs. The team also learned that the Arizona Department of Commerce initiated a utilities study to determine the most efficient utility methods for compensating the impending loss in Excess Utilities payments. However, this massive project was terminated because of the intense amount of time and energy necessary to

collect utility data from all Arizona school districts. As a result, the team was unable to find utility efficiency information relative to this study.

TUSD's Assets and Energy Manager Doug Crockett has attempted to alleviate the new expenditure burdens through conservation efforts. Of the nine districts studied, TUSD *by far* excels in utilizing conservation methods. Through Mr. Crockett's labors, TUSD has joined forces with the Resources Efficiency Awareness Program (REAP). During fiscal year 2002-2003 alone, TUSD saved \$702,820 by participating in REAP. This program forms partnerships with local and state agencies and corporations to conserve natural resources. Moreover, several TUSD schools have received national recognition as Energy Smart. Additionally, TUSD has formed alliances with private utility companies in the district such as Tucson Water. For example, at no cost to the district, Tucson Water established reclaimed water systems at 36 schools. These new water conversion systems cut water costs by 60 percent.

RECOMMENDATIONS

TUSD is a leader among school districts in utility conservation programs and methods. As TUSD schools are older and more numerous than those in the other eight districts, the team recommends two types of facility consolidation as the only alternatives to reducing utility costs.

<p>Recommendation 23: Consolidate summer school sessions into fewer schools. Estimated savings: \$376,000.</p>

Utility costs are automatically higher during the hot summer months. It would be advantageous for the district to create a consolidated summer school program so that fewer school facilities incur high energy costs. Presently, of TUSD's 122 "schools," at least 75 are open during the summer hours for Summer Enrichment and Academic Success Programs. Beginning fiscal year 2003-2004, TUSD schools will average \$2.71 per square foot of energy costs. At this rate, using the average size of schools, the district would be paying over \$1.4 million to operate 50 elementary schools for four weeks and 25 middle and elementary schools for eight weeks during the summer. Therefore, the team proposes that TUSD consolidate its operational summer schools by 25 percent from 75 to 56 schools. This consolidation plan would save \$376,000 annually, as shown in table 5 below.

Table 5: Proposed Cost Savings of Summer School Consolidation

	Schools	Square Feet	Proposed schools	Adjusted square feet	Old Cost	New Cost	Savings
High Schools	12	834,417	9	625,813	\$347,888	\$260,916	\$86,972
Middle Schools	14	973,487	11	764,883	\$405,869	\$318,897	\$86,972
Elementary	50	3,476,739	36	2,503,252	\$724,766	\$521,832	\$202,935
TOTAL	76	5,284,643	56	3,893,948	\$1,478,523	\$1,101,645	\$376,879

Recommendation 24: Consolidate the number of “schools” from 122 to 110. Estimated savings: \$2.2 million.

As shown in table 6 below, the student/school ratio is significantly lower in TUSD than it is in the other eight sample school districts. The team proposes that TUSD consolidates its 122 schools into 110 schools, for an average student/school ratio of 534 students (table 9). On average, each TUSD school has 69,534 square feet. Based on these numbers, TUSD could decrease its overall facility square footage to 7.6 million square feet from the current 8.4 million. At this rate, using the current utility cost of \$1.56¹ per square foot, the district could save \$1.3 million (as shown in table 9 below). Once expected costs are incorporated into this analysis (additional costs of \$1.15 per square foot), TUSD’s utility costs will rank the highest of the nine districts surveyed (table 7 below). When making the above analysis based on the expected future cost of \$2.71 per square foot, the district could save \$2.2 million in annual utility costs by consolidating into 110 schools (table 9).

- Based on the number of students per square foot in the nine districts, TUSD ranks the lowest (table 8). Not only does TUSD have the smallest number of students *per school* but it also has ‘excess’ in terms of *students per square foot*. This ratio is important because all utility costs are tracked on a per square foot basis. It further reinforces the advantage of school consolidation.
- TUSD school attendance is gradually decreasing annually, creating even greater excess space per student. As the number of students per square foot decreases, TUSD is losing a greater amount of dollars to utilities. Even if costs remain at the expected amount of \$2.71 per square foot, the cost of utilities per student will continue to increase as attendance decreases. These additional savings through consolidation could immediately be shifted to classrooms.
- Tucson Electric Power has indicated that TUSD could receive a lower rate on wattage if its schools were consolidated.

¹ FY2003 information collected from the accounting department of TUSD. Square foot was collected from the Arizona School Facilities Board.

Table 6: Ranking of Number of Students Per School

School District	Average Age	Number of Students/School	Rank
Peoria	---	1,050	1
Gilbert	---	907	2
Deer Valley	47	907	2
Paradise Valley	40	801	4
Mesa	28	787	5
Amphi	64	747	6
Sunnyside	25	734	7
Marana	20+	697	8
TUSD	45	482	9

Table 7: Ranking of Utility Cost Per Square Foot FY 2003

School District	Utilities Cost/Sqft	Rank
Mesa	\$1.46	1
TUSD	\$1.56	2
Gilbert	\$1.59	3
Amphi	\$1.89	4
Deer Valley	\$1.93	5
Sunnyside	\$2.03	6
Paradise Valley	\$2.04	7
Marana	\$2.58	8
Peoria	---	
TUSD FY 2004*	\$2.71	9

* Expected Cost

Table 8: Ranking of Number of Students Per Square Foot

School District	Square feet	Number of Students	Number of Students/sq foot*	Rank
Peoria	3,531,808	34,658	9.81	1
Mesa	8,024,437	70,058	8.73	2
Deer Valley	3,392,088	29,037	8.56	3
Sunnyside	1,743,389	14,680	8.42	4
Gilbert	3,832,374	31,730	8.28	5
Paradise Valley	4,113,470	33,644	8.18	6
Amphi	2,059,019	16,423	7.98	7
Marana	1,610,178	11,853	7.36	8
TUSD	8,483,243	58,784	6.93	9

* the ratio is multiplied by 1000 to make it easier to compare

Table 9: Overall School Consolidation Cost Savings

Number of Schools	Number of Students/school	Number of Square feet	Total Utility Costs	Cost Savings
122	482	8,483,243	\$ 13,233,859	
120	490	8,344,173.44	\$ 13,016,911	\$ 216,949
118	498	8,205,103.89	\$ 12,799,962	\$ 433,897
116	507	8,066,034.33	\$ 12,583,014	\$ 650,846
114	516	7,926,964.77	\$ 12,366,065	\$ 867,794
112	525	7,787,895.21	\$ 12,149,117	\$1,084,743
110	534	7,648,825.66	\$ 11,932,168	\$1,301,691

APPENDIX A – BENEFITS

Chart A-1

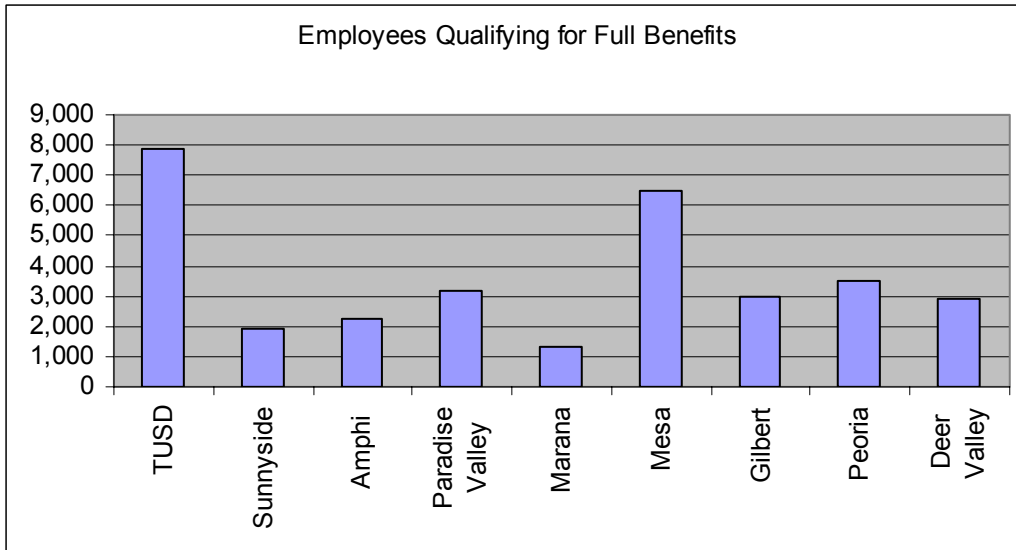


Chart A-2

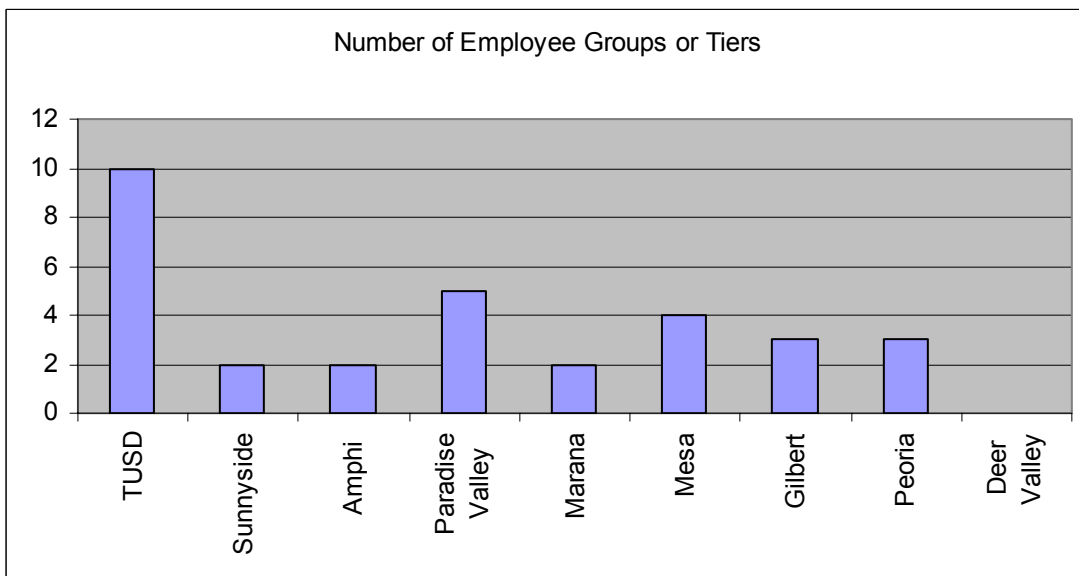
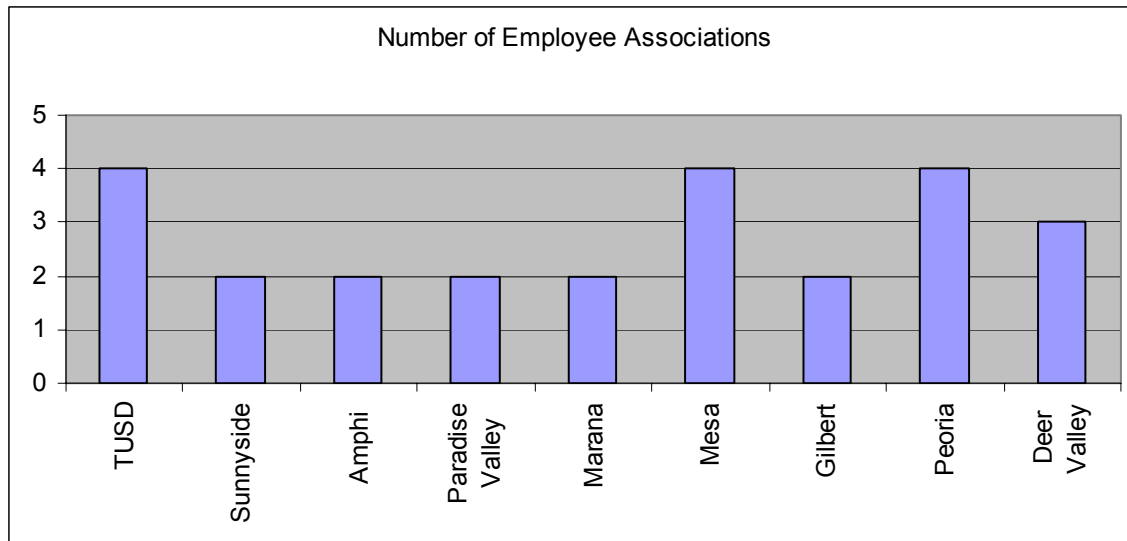


Chart A-3



BIOGRAPHIES

Candice Patrice Collins

Candice Patrice Collins is a native of Tucson, Arizona and is currently enrolled in the Master of Public Administration program at The University of Arizona Eller College of Management. Her area of concentration is Non-Profits and Local Government. Ms. Collins expects to receive her degree in December 2004. Ms. Collins received her Bachelor's of Arts in Creative Writing with a concentration in Fiction in 2002 from the University of Arizona.

As an undergraduate student, Ms. Collins had the privilege of working as an English tutor for a unit in the Department of Multicultural Programs and Service. Her four-year experience as an additional support for fellow students cultivated an interest in service provision. Graduate school provided the opportunity to continue her work in educational support as a graduate teaching assistant for the department of Management and Policy. Upon completion of her degree, Ms. Collins plans to pursue a career in local government, focusing on community building and service provision to disadvantaged populations.

Chris Richardson

Chris Richardson grew up in the Seattle area but has been visiting Tucson for over 25 years, as his aunt has been a resident since he was born. He went to the University of Washington where he received a Double B.S. in Zoology and Fisheries before attending the University of Puget Sound to attain a Masters of Arts in Teaching (endorsements: biology, chemistry, and general science). He has taught marine biology in the Florida Keys, subbed full-time in the Central Kitsap School District, and taught inner-city high school biology in Tacoma.

Mr. Richardson is currently attending the University of Arizona's Eller College of Management to receive his Masters of Business Administration (with emphases on MIS, Finance, and Entrepreneurship). During his two-year tenure, he has maintained an interest in

education: completing a database management project for a charter school with offices in Tucson and Scottsdale, developing a business plan to improve administrator efficiencies within attendance reporting, and working with the TUSD Blue Ribbon Committee to pursue this effort. Upon graduation in May, he will begin work in Honeywell's IT Pathways program in Torrance, CA but will keep an eye out for entrepreneurial ventures that will help him return to education at a later date.

APPENDIX B – FOOD SERVICE

Table B-1 — TUSD Food Service Revenues and Expenses

		FUND 510	
		BUDGET	ACTUAL
BEGINNING FUND BALANCE (1)	1.		1,429,018
REVENUES			
1500 Earnings on Investments	2.		1,761
1600 Food Service Other Local	3.		5,163,162
	4.		
4500 Restricted Revenue Rec. from Fed. Gov.	5.		14,410,865
4900 Revenue for/on Behalf of the District (2)	6.		0
TOTAL REVENUE (lines 2-6)	7.	5,900,000	17,575,788
5200 Interfund Transfers-In	8.	0	
TOTAL AVAILABLE (lines 1, 7, and 8)	9.	18,735,001	19,004,806

EXPENDITURES	FOOD SERVICE FUND 510	MAINTENANCE & OPERATION FUND 001	CAPITAL PURCHASES FUNDS 610 & 625	Function 3100 only
	BUDGET		ACTUAL	ACTUAL
6150 Classified Salaries		1,596,225	0	(3)
6200 Employee Benefits		395,365	0	ACTUAL
6400 Purchased Property Services		1,177	0	0
6570 Food Service Management		0	0	0
6592 Services Purchased from Other AZ Districts		0	0	0
6610 General Supplies (Nonfood Items)		117,168	0	
6620 Energy		0	0	
6631 USDA Commodities (Excluding Freight)		167,202		0
6631 USDA Commodities (Freight Only)		8,313		
6632 Other Food		1,042,892		
6700 Property (Excluding 6731-37)				
6731-37 Furniture & Equipment, Vehicles, & Tech.		96,917		
Other Expenditures		49,743	0	0
TOTAL EXPENDITURES (lines 10-22)	5,900,000	3,475,002	0	0
6910 Indirect Costs				0
6930 Interfund Transfers-Out	0			0
		3,475,002		
TOTAL EXPENDITURES & OTHER USES (lines 23-25)		711,840		
ENDING FUND BALANCE (line 9 minus line 26) (1)				

Table B-2 — Districts' Funds Directed to Food Service in 2001-2003

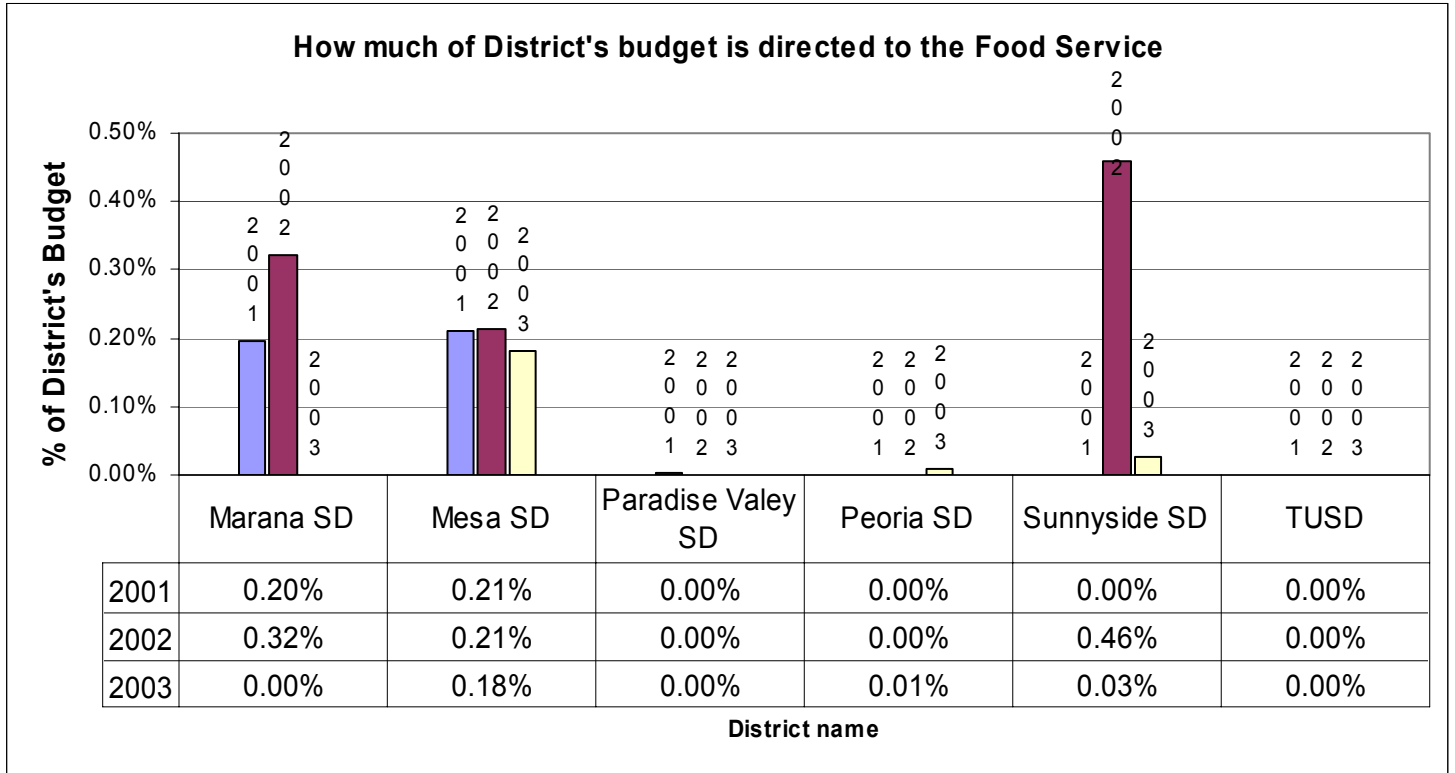


Table B-3 — What are “dollars spent in the classroom?”

"What are dollars spent in the classroom?"

The NCES includes only current expenditures¹ in the following categories:

Classroom Personnel

- Teachers
- Teachers' aides
- Substitute teachers
- Graders
- Guest lecturers/visiting faculty

General Instructional Supplies

- Paper
- Pencils
- Crayons, and like items

Tuition

- Paid to out-of-state districts and private institutions

Instructional Aids

- Textbooks
- Workbooks
- Films
- Software
- Kits

Activities

- Field trips (excluding transportation, hotel, and food costs)
- Athletics
- Cocurricular activities (choir, band, etc.)

"What expenditures are excluded from dollars spent in the classroom"?

Plant Operation and Maintenance

- Salaries, benefits, and other costs for heating/cooling, equipment repair, groundskeeping and security

Administration

- Superintendents, principals, business managers, and staff working in accounting, payroll, purchasing, warehousing, and printing

Student Support Services

- Counselors, audiologists, psychologists, speech pathologists, and nurses

Instructional Support Services

- Librarians, teacher training, and curriculum development

Food Service

- Salaries, benefits, and other costs for preparing and serving meals and snacks

Transportation

- Salaries, benefits, and other costs for transporting students to and from school and school activities

¹ The NCES defines current expenditures as those incurred for the day-to-day operation of schools. They include all expenditures except those associated with repaying debt, capital outlays (for example, purchases of land, buildings, and equipment), and programs outside the scope of preschool to grade 12 (for example, adult education and community services).

Source: Auditor General staff analysis of the National Center for Education Statistics' *National Public Education Financial Survey Instruction Booklet*.

BIOGRAPHIES

Sergei Bulavin

Sergei was born in the Ukraine in 1976. He earned a specialist degree in economics from the Kiev National University of Economics in 1998. Before entering the Eller MBA program in 2002, he worked in various banking institutions focusing on the development and implementation of marketing strategies in debt and credit card programs, revenue control, and the trading of currencies on the Chicago Mercantile Exchange. His experience as director of International Activities with the *UkrSotsBank* involved expanding sales from a regional market to the international canned food market of Eastern and Western Europe.

Sergei graduated with an MBA Degree from the Eller Graduate Business School in May 2004. He is currently working on the technology transfer project for the *Centro de Investigaciones en Optica, AC* in Leon, Mexico, and will begin an internship with CQG, Inc., in Denver.

Dan Steed

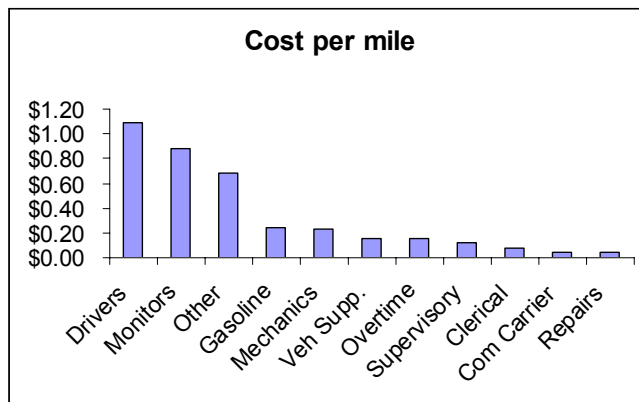
Dan is from Mission Viejo, California and just graduated from the University of Arizona, School of Public Administration and Policy, with a Master's Degree in Public Administration. His concentration is public and nonprofit finance. Dan received an undergraduate degree in Health Sciences from California State University, Chico, and then joined the Peace Corps for a two-year stint in Turkmenistan. Dan plans to work in city or state government to expand on skills he learned as a graduate student. In the long term, he plans to combine his overseas experience and academic background and work in public service at the federal level.

APPENDIX C – TRANSPORTATION

Table C-1 — Understanding Costs-TUSD Transportation Department

Category	Amount	Cost/Mile	%
Contract	10632867.82	2.23	73.09%
Gasoline	1119686.75	0.24	7.70%
Overtime	877506.31	0.18	6.03%
Supplies	734411.75	0.15	5.05%
Temporary	533985.64	0.11	3.67%
Substitutes	412894.02	0.09	2.84%
Maintenance	202257.22	0.04	1.39%
Out-of-class	26344.55	0.01	0.18%
Night-Shift-Diff	7449.35	0.00	0.05%
Total	\$14,547,403.41		100.00%
Total Annual Fleet Miles: 4762955 miles			

Table C-2 — Cost per Mile-TUSD



C-3 — CALCULATIONS for Turnover and Overtime

COST OF TRAINING:

80 hrs classroom training* (\$23.00+\$9.00) + 40 hrs (varies) behind the wheel training*(\$20.00+\$9.00)
 = \$2,560 + \$1,160
 = \$3,720 + \$75 (clerical)
 = \$3,795.00

Including other miscellaneous costs the cost of training hovers around \$4,200.00

Note:

Each trainee driver makes \$9.00/hr during training
 Classroom instructor makes \$23.00/hr and behind the wheel instructors, if they happen to be senior drivers, make \$20.00/hr but if it happens to be the certified instructor, its still \$23.00/hr.

Cost of turnover:

54*\$4,200.00+44*\$4,200.00+ (\$overtime + \$night-time differential + substitute driver)
=\$226,800+\$184,800+ X

Calculation of X:

Overtime

- a. Bus Drivers: \$331,214.86
- b. Substitute Bus Drivers: \$144,052.00
- c. Other Substitutes: \$214,531.45

Total=\$689,798.31

Out-of-class:

18 senior drivers are currently paid out-of-class for training drivers. Their rate is usually \$20/hr for training. The differential is \$7.50. For 40hrs training behind the wheel the out-of-class payment=\$300. 7 trainers are not drivers; they are employed mainly as trainers.

Total drivers trained: 98

Total training hours: 98*120=11,760 hrs

Total behind the wheels training: 3,920 hrs

Total OOC payment: \$29,400.00

Total cost of turnover + absenteeism:

= \$226,800+\$184,800+ (**\$689,798.31+Y**)

(Y=\$\$ spent on substitute drivers)

= **\$1,101,398.31.....(1)**

About 30 substitute drivers are trained per year. This costs \$12,6000 annually.

Add this to result (1): = **\$1,101,398.31 + \$126,000=\$1,227,398.31**

SUBSTITUTE BUS DRIVER overtime calculation:

Total overtime paid to substitute drivers: \$214, 531.45

Average hourly rate paid to regular bus drivers: \$12.50

(Regular Bus drivers at TUSD are 9 1/2 month employees. Most but not all are on 8hr/day contracts).

Routers, dispatchers and Trans techs who substitute for reg. bus drivers get paid overtime pay at the rate of \$18.50/hour.

Total number of such overtime hours=11,441.68 hours

Average number of hours worked by regular bus drivers= (2,080/12)*9.5=1,646.67 hours

In dollar terms, this amounts to \$71, 510.45

Based on the above average hours, the overtime hours mentioned above (11,441.68 hours) are equivalent to 7 regular full-time bus drivers.

(11,441.68/1,646.67 ≈ 7)

• **OVERTIME breakdown:**

- a. Bus Drivers: \$331,214.86
- b. Substitute Bus Drivers: \$144,052.00

- c. Other Substitutes: \$214,531.45
- d. Supervisors: \$71,712.69
- e. Monitors/Substitute monitors: \$115,995.30

TOTAL Overtime: \$877,506.30

- **Fluctuation in the price of GASOLINE:**

- Gasoline cost for 2002-2003: $\frac{\$1,051,034.12}{4,680,805}$ (total annual bus miles) = \$0.224/mile
- Gasoline cost for 2001-2002: $\frac{\$697,291.40}{4,509,607}$ = \$0.154/mile
- Percentage change in fuel cost from 01-02 to 02-03:
 $\frac{\$353,742.72}{697,291.40}$ = 50.73%

LIST OF RESOURCES

Information about school bus advertising laws in Arizona can be found in the Arizona Revised Statutes (ARS 15-342) at <http://www.azleg.state.az.us/ArizonaRevisedStatutes.asp>

The following websites also contain useful information:

<http://www.here4business.co.uk/blyny/environment/energy/BuyingFuels.asp>

<http://www.ebus.com/new.htm>

<http://www.soundtransit.org/>

<http://www.ccities.doe.gov/international/pdfs/hybridbuses.pdf>

http://www.wbcsmobility.org/news/cat_1/news_146/index.asp

<http://www.navc.org/HDcert.html>

<http://www.evworld.com/view.cfm?section=communique&newsid=3692>

http://www.state.ny.us/governor/press/year01/dec26_2_01.htm

<http://bronze.nescaum.org/retrofitworkshop/Bolton.pdf>

<http://www.dieselnet.com/news/0008aqmd.html>

<http://www.rebuild.org/attachments/SolutionCenter/antelopevalleyschoolscs.pdf>

<http://www.dep.state.pa.us/newsreleases/default.asp?ID=1410&varQueryType=Detail>

<http://www.nesea.org/education/confresourcetrackthursday.html>

http://www.etvi.org/For_Kids/New_List_of_Buses_Kids.html#anchor174640

http://www.gm.com/company/gmability/adv_tech/100_news/seattle_102003.html

http://www.dieselforum.org/statements/august_28_2000.html

http://www.ucsusa.org/clean_vehicles/trucks_and_buses/page.cfm?pageID=246

<http://www.epa.gov/air/0624response.html>

BIOGRAPHIES

Kadee Hughes

Kadee Hughes moved from Phoenix to Tucson in 1996 to attend the University of Arizona. She received her B.A. in British Literature and her B.S. in Mathematics from the University in 2001. While attending UA, Kadee fell in love with the city and particularly the mountains where she hikes often. She also fell in love with a handsome electrical engineer and was married last August. Kadee is currently working towards her Masters in Public Administration at the University of Arizona. Her studies have focused on Local Government. She plans to graduate in May 2005 and pursue a career in city management.

Vinay Kulkarni

Vinay Kulkarni will graduate in May 2004 with a Masters in Business Administration (emphases in Marketing and Finance) from the University of Arizona. He holds a Master's degree in Industrial Engineering (emphasis in Quality) from the Systems and Industrial Engineering department at the University of Arizona and a Bachelor's degree in Mechanical Engineering from the University of Mysore, India. He has consulted in various areas including process improvement for the last 4 years.

APPENDIX D – UTILITIES

D-1— TUSD CONSERVATION PROGRAMS & COMMUNITY ALLIANCES:

National	
	Rebuild America
	Energy Smart Schools
State	
	Arizona Department of Environmental Quality (ADEQ)
	Arizona Department of Commerce
Local	
	City of Tucson Environmental Services Tucson Recycles Tucson Water
	Million Solar Roofs
Corporate	
	Southwest Gas Corporation
	Trico Electric Cooperative
	Tucson Electric Power
	Waste Management

D-2— SCHOOL DISTRICT UTILITIES EVALUATION SURVEY

Name:

Title:

District:

1. What utilities does your district use?
2. Are there different utility providers?
3. What type of air system does your district have?
4. Why was this system chosen?
5. Was there a previous system?
6. How many facilities/schools are in your district?
7. What is the average age of your schools?
8. Have any schools been built in the past 10 years? If so, when.
9. Is the district planning on building more schools?
10. Does your district have year-round schooling?
11. Does your district hold summer school in several schools, or are they consolidated (all elementary students in one school, middle school students in one school etc...)?
12. Does your district rent out its facilities? If so, how is the rental amount derived?
13. How much excess utility does your district receive?
14. What methods are being utilized to off-set this impending financial loss?
15. Are any conservation methods being utilized?
16. Do you believe your district uses innovative methods to keep its utility costs down? If so, what are they?
17. Do you have \$/sq. ft. spent on utilities? If so, what is it? If not, what was the most recent annual utility expenditure cost for the district? What amount of square feet did this cover?

Any additional comments:

LIST OF RESOURCES

Interviews

- TUSD
 - Mr. Doug Crockett, Assets and Energy Management
- Sunnyside
 - Hector Encinas, Administrative Director for Business & Finance
 - Gene Repola, Assistant Superintendent
- Marana
 - Mr. Michael Medeiros, Project Coordinator
- Paradise Valley
 - Mr. Dennis Roehler, , Supervisor of Maintenance
 - Dan Rinker, Energy Management Specialist
- Amphitheater
 - Mr. Douglas Aho, Executive Manager Operational Support
- Mesa
 - Mr. David Peterson, Director of Operations
- Siemens
 - Mr. Rich Mchattie, CEM
- Arizona Department of Commerce
 - Mr. Gary Kuykendall

Questionnaire Respondents

1. Mr. Doug Crockett
TUSD, Assets and Energy Management
2. Mr. Hector Encinas
Sunnyside, Administrative Director for Business & Finance
3. Mr. Michael Medeiros
Marana, Project Coordinator
4. Mr. Dennis Roehler
Paradise Valley, Supervisor of Maintenance
5. Mr. Ron Wabschall
Peoria Unified
6. Ms. Jackie McCamy
Gilbert, Accounts Payable Manager
7. Mr. Kent Davis
Deer Valley
8. Mr. Douglas Aho
Amphi, Executive Manager Operational Support
9. Mr. David Peterson
Mesa, Director of Operations

Other data sources:

State of Arizona Auditor General
Department of Education
School Facilities Board website
TUSD website
Marana Unified School District website
Peoria Unified School District website
Gilbert Unified School District website
Deer Valley Unified School District website
Paradise Valley Unified School District website
Marana Unified School District website
Sunnyside Unified School District website
Amphitheater Unified School District website

BIOGRAPHIES**Amber Moore**

Amber Moore has earned a Bachelor of Arts Degree in Political Science and a Masters Degree in Public Administration from The University of Arizona. As a former employee of Senator John McCain, Ms. Moore learned different aspects of government work as well as problems within the bureaucracy. She has broadened her work experience by working for an intergovernmental relations firm that represents private companies and local governments in Southern Arizona. In the future she wishes to combine her academic knowledge in local government and finance with her professional job experience to improve various areas of government service, including education and veterans' affairs.

Gurdeep Sahani

Gurdeep Sahani graduated in May 2004 with a Masters in Business Administration Degree.